

August 22, 2003

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Set	Items	Description
S1	7944	PBX OR PRIVATE() BRANCH?() EXCHANGE?
S2	83027	VOICE() OVER() INTERNET OR INTERNET() PROTOCOL? OR IP OR IPN
S3	23048875	FIND? OR ANALY? OR EXAMIN? OR ASCERTAIN? OR ASSESS? OR CHE- CK? OR CHEQUE? OR CONFIRM? OR DEDUC? OR DETECT? OR DETERMIN? - OR DISCERN? OR DISCRIMINAT? OR DISCOVER? OR IDENTIF? OR LOCAT? OR PINPOINT? OR RECOGNI?
S4	1238239	CONGEST? OR CLOG? OR BOTTLENECK? OR PACK? OR BUSY? OR BACK- ?() UP
S5	7883499	SWITCH? OR CHANG? OR ADAPT? OR ADJUST? OR ALTER OR ALTERAB- LE OR CHANG? OR MODIF? OR READJUST?
S6	8225697	ALTERNAT? OR ANOTHER OR DIFFERENT? OR OPTIMAL?
S7	12146074	ROUT? OR PATH? OR LINE? OR NETWORK? OR TRACK? OR CHANNEL?
S8	71820	(CALL? OR SWITCH? OR TRAFFIC?) () CONTROL?
S9	357	VOICE(3N) CONVERT?
S10	7396	REAL() TIME(2N) TRANSPORT? OR RTP
S11	55163	S3(3N) S4
S12	11790	S5(3N) S6(3N) S7
S13	86	S11 AND S12
S14	5	S13 AND S2
S15	0	S13 AND S1
S16	0	S15 NOT S14
S17	13	S13 AND S8
S18	13	S17 NOT S15
S19	0	S13 AND S9
S20	0	S13 AND S10
S21	1	S1 AND S2 AND S11
S22	1	S21 NOT (S18 OR S15)
S23	13	S1 AND S2 AND S8
S24	0	S23 AND (S9 OR S10)
S25	0	S24 NOT (S22 OR S18 OR S15 OR S14)
S26	13	S23 NOT (S25 OR S22 OR S18 OR S14)
S27	4	RD S14 (unique items)
S28	8	RD S18 (unique items)

August 22, 2003

S29 130 AU=(ORUI, T? OR ORUI T?)  
S30 8 S29 AND (S1 OR S2)  
S31 3 RD (unique items)

August 21, 2003

22/3,K/1 (Item 1 from file: 233)  
DIALOG(R) File 233:Internet & Personal Comp. Abs.  
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00655128 02NR01-305  
**Avaya to meld VPNs and VoIP -- New gateways to prioritize voice on VPN links**

Greene, Tim  
Network World , January 28, 2002 , v19 n4 p8, 1 Page(s)  
ISSN: 0887-7661  
Company Name: Avaya Communication  
Product Name: Avaya VSU-5

... to make a splash at ComNet 2002 by pushing voice capabilities into a small-site **Internet Protocol** ( **IP** ) virtual private network (VPN) appliance, a move that could help enterprise customers save money on...

... sets the stage for tying phones in small offices or even telecommuter offices to corporate **private branch exchanges** (PBXs) via secure VPN links by **identifying** voice packets and tagging them for top priority. Indicates that this support will give remote offices **PBX** phone features and access to the public telephone network over **PBX** trunks to a local phone carrier. Adds that regular phone lines to remote offices could...

August 21, 2003

26/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7250184 INSPEC Abstract Number: B2002-06-6210L-021, C2002-06-5620W-006

**Title:** IP -PBXs: multifaceted management

Author(s): Mier, E.E.; Percy, K.M.

Author Affiliation: Product Test Center, Miercom, Princeton Junction, NJ,  
USA

Journal: Business Communications Review vol.32, no.2 p.48-52

Publisher: BCR Enterprises,

Publication Date: Feb. 2002 Country of Publication: USA

CODEN: BCORBD ISSN: 0162-3885

SICI: 0162-3885(200202)32:2L.48:PMM;1-T

Material Identity Number: F939-2002-003

U.S. Copyright Clearance Center Code: 0162-3885/02/\$0.00+.50

Language: English

Subfile: B C D

Copyright 2002, IEE

**Title:** IP -PBXs: multifaceted management

Abstract: Miercom tested 10 IP - PBX systems from eight vendors, and we have previously reported on these products' configurations, feature support

... of those systems-the strengths and shortcomings users will encounter when configuring and monitoring an IP -telephony environment. A thumbnail comparison of the systems tested is provided, along with part of their systems' main call - control processor.

Identifiers: IP - PBX systems...

... IP -telephony monitoring...

... call - control processor

26/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6525062 INSPEC Abstract Number: B2000-04-6230-003, C2000-04-7410F-083

**Title:** Calling all computers: an UnPBX update

Author(s): Clark, E.

Journal: Network Magazine vol.15, no.1 p.58-60, 62

Publisher: Miller Freeman,

Publication Date: Jan. 2000 Country of Publication: USA

CODEN: LANNER ISSN: 1093-8001

SICI: 1093-8001(200001)15:1L.58:CCUU;1-P

Material Identity Number: H420-2000-002

Language: English

Subfile: B C

Copyright 2000, IEE

...Abstract: telephony (CT) is becoming an intriguing prospect for more organizations, the role of the traditional PBX is being re-examined. Interest in a growing number of alternatives is rising. These new systems are variously called UnPBX, IP PBX, PC PBX, LAN PBX, and communications servers. Most are based on standard components, such as PC hardware and OSS, and support IP and other common standards, such as telephony API (TAPI) and H.323. Most have strong integrated messaging features, including voice mail, call control, automated attendant, desktop dialing software, and screen pops.

...Identifiers: IP PBX ; ...

...PC PBX ; ...

August 21, 2003

...LAN PBX ; ...

... call control ;

26/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6411741 INSPEC Abstract Number: B2000-01-6230B-001, C2000-01-7410F-004

**Title: Changes coming to PBX technology**

Author(s): Sulkin, A.

Journal: Business Communications Review vol.29, no.9 p.38, 40, 42,  
44

Publisher: BCR Enterprises,

Publication Date: Sept. 1999 Country of Publication: USA

CODEN: BCORBD ISSN: 0162-3885

SICI: 0162-3885(199909)29:9L.38:CCT;1-H

Material Identity Number: F939-1999-011

U.S. Copyright Clearance Center Code: 0162-3885/99/\$0.00+.50

Language: English

Subfile: B C D

Copyright 1999, IEE

**Title: Changes coming to PBX technology**

...Abstract: passed since PBXs migrated from an electromechanical platform to computer-based stored program control; the **PBX** 's migration from analog to digital also began about a quarter of a century ago. In the intervening years, despite many important improvements and refinements, **PBX** basics remained largely unchanged. Until now. Today, revolutionary changes in system design are under way in all of the key elements of **PBX** operations-call processing, switching and transmission. PBXs are migrating toward a telephony server model, where a nonproprietary platform will perform **call control** and feature provisioning. We are also moving toward a future where **IP** -based packet transport will replace circuit-switched time-division multiplexing (TDM). These changes will have a major effect on all aspects of **PBX** design and operations-from cabinet architecture to peripheral equipment support and desktop terminals-telephones.

Identifiers: **PBX** technology...

...analog PBX ; ...

...digital PBX ; ...

... call control ; ...

... IP -based packet transport...

... PBX design

26/3,K/4 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00676848 02PI12-107

Dial IP for business -- Using your data network for your phone system is beginning to make sense, especially for smaller companies

Erlanger, Leon

PC Magazine , December 24, 2002 , v21 n22 p70-71, 2 Page(s)

ISSN: 0888-8507

Dial IP for business -- Using your data network for your phone system is beginning to make sense...

August 21, 2003

Reports that in 2001, a lot of factors have come together to position **Internet Protocol (IP)** telephony or **Voice-over-Internet Protocol (VoIP)** as a strong contender for small-business communications. Explains that **IP** telephony digitizes voice and transports it over an **IP** network, and because the VoIP connection is packet-switched, data and multiple voice streams can share a single **IP** connection. Mentions that small businesses can retain **private branch exchange (PBX)** systems at various locations but gateways to translate and send voice calls and faxes over the **IP** wide area network. Says that a local area network **private branch exchange (LAN PBX)** eliminates the traditional **PBX**, key system, or Centrex service, and uses the LAN for both voice transport and **call control**. Includes a photo and a diagram. (MEM)

Descriptors: **Internet Protocols**; Telephony; Data Communication; Telecommunications; Wide Area Networks; Local Area Networks; Small Business

26/3,K/5 (Item 2 from file: 233)  
DIALOG(R)File 233:Internet & Personal Comp. Abs.  
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00670370 02NR09-303  
**Siemens raises its VoIP -- New IP telephony products expand capacity, extend reach**  
Hochmuth, Phil  
Network World, September 30, 2002, v19 n39 p1, 13, 2 Page(s)  
ISSN: 0887-7661  
Company Name: Siemens  
Product Name: HiPath 5000; HiPath 3000

**Siemens raises its VoIP -- New IP telephony products expand capacity, extend reach**  
Reports that Siemens is set to unleash a barrage of **IP (Internet protocol)** telephony products and applications aimed at large scale enterprise convergence deployments. Says that updates for Siemens' HiPath 5000 enterprise softswitch will double the capacity of the **IP PBX** to 2,000 lines, and it will be possible to use smaller HiPath 3000s as...

... Explains that at the heart of the new capabilities is Version 4.0 of Siemens' **call-control** software, which runs the HiPath 5000 in corporate sites and the HiPath 3000 in smaller...

26/3,K/6 (Item 3 from file: 233)  
DIALOG(R)File 233:Internet & Personal Comp. Abs.  
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00648197 01VC11-003  
**Business phone systems -- Business phone systems are more open than ever; rich with convergence features like IP trunking and extensions, voice/data...**  
Green, Andy  
Communications Convergence, November 1, 2001, v9 n11 p39-56, 11  
Page(s)  
ISSN: 1534-2840

...**phone systems -- Business phone systems are more open than ever; rich with convergence features like IP trunking and extensions, voice/data...**

...**and packaging strategies.** Says that these new systems are equipped with convergence features such as **Internet protocol (IP)** trunking and extensions, voice/data integration, distributed networking, personal computer-based **call control** contact center functionality. Describes products such as the Omni PCX 4400 **private branch exchange (PBX)** from Alcatel; the AltiServ Small Office **PBX**, the AltiServ Office **PBX**,

August 21, 2003

and the AltiCenter call-center-in-a-box from AltiGen; the IP Office convergence equipment from Avaya; and the AVVID network PBX from Cisco Systems. Includes five photos. (EPE)

Descriptors: Telephone; Telephony; Internet Protocols; Telecommunications; Data Communication; Networks; Distributed Computing

26/3,K/7 (Item 4 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00633485 01PI06-106

Go IP for voice calls

Erlanger, Leon M

PC Magazine, June 26, 2001, v20 n12 p39, 1 Page(s)

ISSN: 0888-8507

Company Name: GoBeam

URL: <http://www.gobeam.com>

Product Name: GoBeam

Go IP for voice calls

Presents a favorable review of GoBeam (\$560), a managed voice over Internet Protocol (VoIP) service from GoBeam Inc. of Sunnyvale, CA (866). Explains that it delivers call control via Sylantrio Soft Switch and good voice quality over broadband connection to GoBeam's facilities...

... the end of 2002. Concludes that it is an elegant alternative to a small office private branch exchange (PBX), a soft PBX, or a Centrex service. On a scale ranging from 1 to 5, received the rating...

Descriptors: Telephony; Internet Protocols; Broadband Communication; Telecommunications; Online Systems; Online Services; Small Business

26/3,K/8 (Item 5 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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00612801 00NR10-405

Cisco lands large VoIP deal -- New Zealand govt. replacing 130 PBXs with IP servers, phones

Duffy, Jim

Network World, October 30, 2000, v17 n44 p26, 1 Page(s)

ISSN: 0887-7661

Company Name: Cisco Systems; Logical Networks; Clear Communications

Cisco lands large VoIP deal -- New Zealand govt. replacing 130 PBXs with IP servers, phones

... States-based networking giant Cisco Systems Inc. a contract to implement an 8,000-seat voice-over-Internet Protocol (VoIP) network. Says that more than 130 private branch exchanges (PBXs) are being replaced with 10 Cisco Media Convergence Servers running Cisco CallManager for call control and processing, along with 20 Cisco uOne servers for delivering networked messaging services. Mentions that...

... 8,000 outlets in more than 200 government offices throughout the country. Explains that the IP telephone system supports two more agencies aside from MSP: the Department of Work and Income...

Descriptors: Telephony; Internet Protocols; Contract; Federal Government; International; Networks; Outsourcing

26/3,K/9 (Item 6 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

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August 21, 2003

00602816 00CX05-004

Next-gen PBX test series: Shoreline Communication System -- We're back for another close look at next-generation phone systems. This month's contender has an interesting combination of...

Gifford, James

Computer Telephony , May 1, 2000 , v8 n5 p120-128, 8 Page(s)

ISSN: 1072-1711

Company Name: Shoreline Teleworks

URL: <http://www.goshoreline.com>

Product Name: Shoreline Communications System

Next-gen PBX test series: Shoreline Communication System -- We're back for another close look at next-generation...

Presents a very favorable review of Shoreline Communications System (\$8,620), a combination analog and Internet Protocol -based telephony system from Shoreline Teleworks of Sunnyvale, CA (408). Explains that it has traditional telephone trunking and extensions bound together over an IP network backbone. Cites a server running Windows NT 4.0 for ShoreVoice voicemail server, ShoreGear...

... administrative graphical user interface, multiple server capabilities, call logging and reporting, voice message notification, user call control , and remote access to messages. Mentions, however, that it lacks call center reporting, least cost...

Descriptors: Telephony; Internet Protocols ; Telecommunications; Data Communication; Broadband Communication; Client-Server Computing

26/3,K/10 (Item 7 from file: 233)

DIALOG(R) File 233:Internet & Personal Comp. Abs.

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00555852 99PT12-226

Cisco CallManager

Rigney, Steve

PC Magazine , December 14, 1999 , v18 n22 p126, 130, 2 Page(s)

ISSN: 0888-8507

Company Name: Cisco Systems

URL: <http://www.cisco.com>

Product Name: Cisco CallManager

Presents a mixed review of Cisco CallManager (\$29,890), a LAN PBX solution from Cisco Systems Inc. of San Jose, CA (800, 408). Says this is an open standards approach, and calls this approach appealing. Includes standalone IP phones and Windows NT-based call control software. Requires Microsoft Internet Information Server for access to menus via standard browser. Says administration...

...Also criticizes the lack of software-based client, detailed user control settings, and some important call - control features including call restriction. Points out it is the most expensive product tested. Concludes this is a good approach to IP telephony, though somewhat limited. (kgh)

Descriptors: Telephone; Local Area Networks; Internet Protocols ; Standards; Telephony

26/3,K/11 (Item 1 from file: 94)

DIALOG(R) File 94:JICST-EPlus

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04581534 JICST ACCESSION NUMBER: 00A0452239 FILE SEGMENT: JICST-E

Proposal of Intranet Telephony Systems Using VoIP.

KASHIMOTO SHIN'ICHI (1); MURAI TOSHIO (1)

(1) Toshiba Corp.

August 21, 2003

Denshi Joho Tsushin Gakkai Gijutsu Kenkyu Hokoku(IEIC Technical Report  
(Institute of Electronics, Information and Communication Engineers),  
2000, VOL.99,NO.675(SSE99 180-219), PAGE.37-42, FIG.10, TBL.3, REF.4

JOURNAL NUMBER: S0532BBG

UNIVERSAL DECIMAL CLASSIFICATION: 621.395 681.3:654

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Recently, Internet telephone systems by VoIP(Voice over IP) for cost reduction have been popular and CTI(Computer Telephony Integration) using VoIP has been...

...paper, we will propose intranet telephony systems using VoIP, particularly explaining the methods to realize **call control** services to terminal groups or trunk groups which have not been recommended in H.323...

...DESCRIPTORS: **PBX** (exchange

26/3,K/12 (Item 2 from file: 94)

DIALOG(R)File 94:JICST-Eplus

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04379982 JICST ACCESSION NUMBER: 99A0829306 FILE SEGMENT: JICST-E  
**Network system of IMUS. Next generation intra-network fusing IP with ATM.**

SHIGYO YUSUKE (1); ATARASHI MASAHIRO (1); TAKEUCHI NOBUYA (1); KOSUGE CHIZUKO (1); TOKUSHIGE MASATOMO (1)

(1) Ntt

NTT Gijutsu Janaru, 1999, VOL.11,NO.5, PAGE.57-59, FIG.4, TBL.1, REF.1

JOURNAL NUMBER: F0050BAZ ISSN NO: 0915-2318

UNIVERSAL DECIMAL CLASSIFICATION: 621.391.1 621.394/.395

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

**Network system of IMUS. Next generation intra-network fusing IP with ATM.**

...ABSTRACT: of the design, operation, and control of the user network using ATM network. The optimum **traffic control** system NetStation is a system which transfers diversified traffic of the appropriate quality at low...

DESCRIPTORS: **TCP- IP** ; ...

... **PBX** (exchange

26/3,K/13 (Item 3 from file: 94)

DIALOG(R)File 94:JICST-Eplus

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04182391 JICST ACCESSION NUMBER: 99A0113394 FILE SEGMENT: JICST-E  
**Computer Telephony Integration. UnPBX. IP PBX , IP PHONE.**

NOGUCHI KATSUJI (1)

(1) Nttintanashonaru

Erekutoronikusu, 1998, VOL.43,NO.12, PAGE.30-31, FIG.1

JOURNAL NUMBER: F0037AAL ISSN NO: 0421-3513 CODEN: ERKTA

UNIVERSAL DECIMAL CLASSIFICATION: 621.395 621.395.33/.38

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

August 21, 2003

**Computer Telephony Integration. UnPBX. IP PBX , IP PHONE.**  
**ABSTRACT:** A UnPBX system composed of IP PBX and IP PHONE. IP PHONE is a multi-function telephone machine with an Ethernet interface. IP PBX consists of a call control server of Windows NT base which realizes the conventional PBX function, and a gateway which connects the existing telephone network and IP network. IP PHONE is suitable for construction of a network in a large-scale network, featuring useability of the existing Ethernet and WAN IP network.  
...**DESCRIPTORS:** **PBX** (exchange

August 22, 2003

31/3,K/1 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)  
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

06264273 E.I. No: EIP03027312524

**Title: Middle and large size IP - PBX NEAX2400IPX (internet protocol exchange)**

Author: Inata, Hisashi; Noda, Osamu; Orui, Takeo ; Sagawa, Shuichi; Moriyama, Jun

Source: NEC Research and Development v 43 n 4 October 2002. p 265-271

Publication Year: 2002

CODEN: NECRAU ISSN: 0547-051X

Language: English

**Title: Middle and large size IP - PBX NEAX2400IPX (internet protocol exchange)**

Author: Inata, Hisashi; Noda, Osamu; Orui, Takeo ; Sagawa, Shuichi; Moriyama, Jun

Abstract: The demand of enterprise networking is moving toward IP convergence, Broadband communication and Ubiquitous network rapidly to maximize the workforce efficiency and minimize the...

...Internet growth. In order to respond to these market needs, we have developed newly architected IP - PBX NEAX2400IPX system which covers mid-large size enterprise with high grade convergence of voice and...

Identifiers: Internet protocol exchange; Voice over internet protocol ; Total cost of ownership

31/3,K/2 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7476966 INSPEC Abstract Number: B2003-01-6230B-006, C2003-01-7410F-040

**Title: Middle and large size IP - PBX APEX7600i**

Author(s): Inata, H.; Noda, O.; Orui, T. ; Sagawa, S.; Moriyama, J.

Journal: NEC Technical Journal vol.55, no.8 p.7-12

Publisher: NEC,

Publication Date: Aug. 2002 Country of Publication: Japan

CODEN: NECGEZ ISSN: 0285-4139

SICI: 0285-4139(200208)55:8L.7:MLSA;1-0

Material Identity Number: H719-2002-010

Language: Japanese

Subfile: B C

Copyright 2002, IEE

**Title: Middle and large size IP - PBX APEX7600i**

Author(s): Inata, H.; Noda, O.; Orui, T. ; Sagawa, S.; Moriyama, J.

Abstract: The demand of enterprise networking is moving rapidly toward IP convergence, broadband communication and ubiquitous network to maximize workforce efficiency and to minimize the total...

... growth. In order to respond to these market needs, we have developed a newly architected IP - PBX APEX7600i system which covers middle to large size enterprises with high grade convergence of voice...

Identifiers: IP - PBX ; ...

... IP convergence

31/3,K/3 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-Eplus

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01811948 JICST ACCESSION NUMBER: 93A0777316 FILE SEGMENT: JICST-E

August 22, 2003

**APEX7400IMS**

MORIDE HIROYUKI (1); OISHI ISAO (1); FUJIOKA MASAHIKO (1); YAMAZAKI SADAO (1); ORUI TAKEO (1); FURUI KATSUNORI (1); SHIMURA TAKASHI (2); NAKAZAWA YUTAKA (2); KOYAMA KAZUHIKO (3)  
(1) NEC Corp.; (2) NEC Engineering Ltd.; (3) Nihondenkitohoku  
NEC Giho(NEC Technical Journal), 1993, VOL.46,NO.7, PAGE.11-17, FIG.5,  
TBL.1

JOURNAL NUMBER: G0475BAB ISSN NO: 0285-4139

UNIVERSAL DECIMAL CLASSIFICATION: 621.395.33/.38

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

MORIDE HIROYUKI (1); OISHI ISAO (1); FUJIOKA MASAHIKO (1); YAMAZAKI SADAO (1); ORUI TAKEO (1); FURUI KATSUNORI (1)

...DESCRIPTORS: PBX (exchange)

August 22, 2003

File 16:Gale Group PROMT(R) 1990-2003/Aug 21  
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(c) 1999 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2003/Aug 21  
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File 621:Gale Group New Prod.Annou.(R) 1985-2003/Aug 21  
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File 275:Gale Group Computer DB(TM) 1983-2003/Aug 21  
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File 570:Gale Group MARS(R) 1984-2003/Aug 21  
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Set	Items	Description
S1	75321	PBX OR PRIVATE()BRANCH?()EXCHANGE?
S2	492099	VOICE()OVER()INTERNET OR INTERNET()PROTOCOL? OR IP OR IPN
S3	14429423	FIND? OR ANALY? OR EXAMIN? OR ASCERTAIN? OR ASSESS? OR CHE- CK? OR CHEQUE? OR CONFIRM? OR DEDUC? OR DETECT? OR DETERMIN? - OR DISCERN? OR DISCRIMINAT? OR DISCOVER? OR IDENTIF? OR LOCAT? OR PINPOINT? OR RECOGNI?
S4	4282492	CONGEST? OR CLOG? OR BOTTLENECK? OR PACK? OR BUSY? OR BACK- ?()UP
S5	8245904	SWITCH? OR CHANG? OR ADAPT? OR ADJUST? OR ALTER OR ALTERAB- LE OR CHANG? OR MODIF? OR READJUST?
S6	7054142	ALTERNAT? OR ANOTHER OR DIFFERENT? OR OPTIMAL?
S7	12379412	ROUT? OR PATH? OR LINE? OR NETWORK? OR TRACK? OR CHANNEL?
S8	70205	(CALL? OR SWITCH? OR TRAFFIC?)()CONTROL?
S9	3879	VOICE(3N)CONVERT?
S10	9603	REAL()TIME(2N)TRANSPORT? OR RTP
S11	123391	S3(3N)S4
S12	15801	S5(3N)S6(3N)S7
S13	85	S11(S)S12
S14	21	S13(S)S2
S15	0	S13(S)S1
S16	0	S15 NOT S14
S17	0	S13(S)S8
S18	0	S17 NOT S15
S19	0	S13(S)S9
S20	0	S13(S)S10
S21	18	S1(S)S2(S)S11
S22	18	S21 NOT (S18 OR S15)
S23	362	S1(S)S2(S)S8
S24	0	S23(S)(S9 OR S10)
S25	0	S24 NOT (S22 OR S18 OR S15 OR S14)
S26	14	RD S14 (unique items)
S27	10	RD S22 (unique items)
S28	10	S27 NOT S26
S29	0	AU=(ORUI, T? OR ORUI T?)

August 22, 2003

26/3,K/1 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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07505762 Supplier Number: 62382400 (USE FORMAT 7 FOR FULLTEXT)  
**Multilayer Switching: A Must for the Intelligent Edge. (Technology Information)**

Chander, Nay  
Telecommunications, v34, n5, p51  
May, 2000  
Language: English Record Type: Fulltext Abstract  
Document Type: Magazine/Journal; Trade  
Word Count: 1277

... to change any time soon, there is no compelling reason to migrate these applications to **IP networks**. Multilayer **switches** must be able to simultaneously **switch** different traffic at Layer 2, 3 or 4 without performance degradation. Multilayer switches do this by **examining** deep inside the **packet** and switching it at the appropriate layer.

The Real-Time Virtual Service Layer  
The ability...

26/3,K/2 (Item 2 from file: 16)  
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06400467 Supplier Number: 54841517 (USE FORMAT 7 FOR FULLTEXT)  
**Can Intrusion Detection Keep an Eye on Your Network's Security? (Technology Information)**  
Karve, Anita  
Network, pNA  
April 1, 1999  
Language: English Record Type: Fulltext Abstract  
Document Type: Magazine/Journal; Trade  
Word Count: 3467

... of important attacks, including Trojan horses, changes to Unix kernels, Satan, buffer overflows, system configuration **changes**, and Ping flooding.

Another **network** -based intrusion-detection product is Cisco's NetRanger, a product that came from the company...

...two components: the Sensor and the Director. The Sensor works in just about any TCP/ **IP** network and looks at LAN segments, Internet connections, and the network side of dial-up modem pools that connect companies to external business partners. This piece of the product **examines** each **packet** header and payload, and the packet's relationship to others around it in the data...

26/3,K/3 (Item 3 from file: 16)  
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06300273 Supplier Number: 54496362 (USE FORMAT 7 FOR FULLTEXT)  
**The promise of packet switching. (development by Donald Davies and Paul Baran in the 1960s.) (Technology Information)**  
Brandel, Mary  
Computerworld, p83(1)  
April 26, 1999  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Tabloid; Trade  
Word Count: 764

August 22, 2003

... to be retransmitted, not entire messages. Plus, if packets run into downed computers or cut **lines**, they **find another path**.

**Packet switching** is also cheaper because you can build networks out of less reliable parts because the...

...than any of its pieces, Baran says. No wonder most network protocols today, including TCP/ **IP**, X.25, and frame relay, are based on packet switching.

Despite the similarities, the work...

26/3,K/4 (Item 4 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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06071547 Supplier Number: 53548168 (USE FORMAT 7 FOR FULLTEXT)  
**NetCracker: A Network Design Dynamo. (NetCracker Technology's NetCracker Professional version 2.0 nework design software ) (Software Review) (Evaluation)**

Fetters, Dave  
Network Computing, p32(1)  
Jan 11, 1999  
Language: English Record Type: Fulltext  
Article Type: Evaluation  
Document Type: Magazine/Journal; Trade  
Word Count: 958

... to the devices' visual statistics.

To validate how realistic the simulation was, I switched TCP/ **IP** routing from OSPF to RIP and back again, and was delighted with how the packet flows changed dynamically. Having first set routing to RIP, I was easily able to trace **packet** routes and **determine** which routers and switches were being stressed by NetCracker's indicator bars. After I rerouted...

...among the different routers, as I expected. Additionally, by increasing the latency and load in **different switches**, **routers** and media segments, I determined just how well the simulation would react. I was again...

26/3,K/5 (Item 5 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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04644781 Supplier Number: 46833470 (USE FORMAT 7 FOR FULLTEXT)  
**SOHO ROUTING -- Remote access goes mainstream; we test new routers with end-user ease-of-use**  
CommunicationsWeek, p77  
Oct 28, 1996  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 4567

... console port, which provides a menu-based text shell, or through SNMP. The 520 routes **IP** and **IPX**, supports firewall construction and has a basic scrambling feature to make life hard for people watching **packets** with protocol **analyzers**. You can dial in to the 520 using Microsoft's Dial-up **Networking** client and an ISDN terminal **adapter**, and connect the 520 to **another router**.

Although the built-in management screens are fairly basic in their text interface, we found...

26/3,K/6 (Item 1 from file: 148)

August 22, 2003

DIALOG(R) File 148:Gale Group Trade & Industry DB  
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10996120 SUPPLIER NUMBER: 54517410 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
QOS: what can service providers deliver? (includes related article on vendor  
activity and glossary) (quality of service at public packet networks)

Wexler, Joanie  
Business Communications Review, 29, 4, 25(6)

April, 1999

ISSN: 0162-3885 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 4839 LINE COUNT: 00404

... seven being highest priority, to rank a traffic flow's priority as  
it leaves one **network** for **another**. (See TOS)

MPLS (Multiprotocol Label Switching) - An emerging IETF standard  
for labeling packets to solve several network issues with scalability,  
privacy...

...particular traffic that should receive a certain priority through the  
network, as well as to **identify packets** in an IP VPN that belong to a  
particular user group, ensuring privacy.

Per-VC queuing - A mechanism...

26/3,K/7 (Item 2 from file: 148)

DIALOG(R) File 148:Gale Group Trade & Industry DB  
(c)2003 The Gale Group. All rts. reserv.

09906659 SUPPLIER NUMBER: 20052750  
Gigabit Ethernet: the road to nowhere? (Technology Information)

Layland, Robin  
Data Communications, v26, n16, p23(2)  
Nov 21, 1997

ISSN: 0363-6399 LANGUAGE: English RECORD TYPE: Abstract

...ABSTRACT: meantime, load balancing devices can divide processing  
equally among servers. These devices sit between the **switch** and the  
backbone **network**. Adding **another** device to the network, however, raises  
reliability and maintenance concerns. Startup Alteon is currently the...

...approaches to easing the server's CPU processing loads. For example,  
they can recalculate the IP **checksum** of each **packet** and copy the  
packets directly into server memory.

26/3,K/8 (Item 3 from file: 148)

DIALOG(R) File 148:Gale Group Trade & Industry DB  
(c)2003 The Gale Group. All rts. reserv.

09337240 SUPPLIER NUMBER: 19178206 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Offering routers a helping hand. (Bay Networks introduces Switch Node  
switch/router hybrid) (Product Announcement)

Caruso, Jeff  
CommunicationsWeek, n652, p9(1)  
March 3, 1997

DOCUMENT TYPE: Product Announcement ISSN: 0746-8121 LANGUAGE:  
English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 497 LINE COUNT: 00041

...ABSTRACT: switching and routing technology. The Switch Node functions  
as a router front end to route IP and IPX hardware traffic. The device  
performs routing in the switch hardware on the campus...

...Node's processor automatically identifies the network's topology and  
develops a forwarding table by **checking** IP **packets** on their way to

August 22, 2003

the router. Switching is handled by another processor. The product is being marketed as an adjunct to a router. Bay Networks will...

...currently lacks a coherent hybrid strategy that would enable it to compete against tag and IP switching products in the Internet service provider market. Bay Networks does not plan to support tag or IP switching, but will detail its Internet strategy within a few months. The Switch Node is...

26/3,K/9 (Item 4 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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09099560 SUPPLIER NUMBER: 18817602 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
E-Z SOHO routing. (includes related articles on testing methodology, Max Awards) (includes related product-comparison tables) (Product Testing: Remote LAN Access) (Hardware Review) (Evaluation)  
Rash, Wayne, Jr.  
CommunicationsWeek, n635, p77(6)  
Oct 28, 1996  
DOCUMENT TYPE: Evaluation ISSN: 0746-8121 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 5732 LINE COUNT: 00443

... console port, which provides a menu-based text shell, or through SNMP. The 520 routes IP and IPX, supports firewall construction and has a basic scrambling feature to make life hard for people watching packets with protocol analyzers. You can dial in to the 520 using Microsoft's Dial-up Networking client and an ISDN terminal adapter, and connect the 520 to another router.

Although the built-in management screens are fairly basic in their text interface, we found...

26/3,K/10 (Item 5 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2003 The Gale Group. All rts. reserv.

05737186 SUPPLIER NUMBER: 12030550  
Token ring routing: what IBM users should know about it. (includes a related article listing router features) (Token Ring Internetworking advertising supplement)  
Data Communications, v21, n1, pS10(8)  
Jan, 1992  
ISSN: 0363-6399 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: The two basic types of internetworking devices are bridges and routers, both of which are data packet switches that move data from one network to another. Both analyze the packet to determine whether it should be forwarded to the next local area network (LAN) or filtered. Routers...

...wide area network (WAN) links between LANs. Protocol dependent routers used in Ethernet and TCP/ IP applications rely on communicating computers to determine where packets should be sent; protocol independent routers are able to determine by themselves where LAN packets...

26/3,K/11 (Item 1 from file: 88)  
DIALOG(R)File 88:Gale Group Business A.R.T.S.  
(c) 2003 The Gale Group. All rts. reserv.

04570452 SUPPLIER NUMBER: 19958181  
Is it a switch or is it a router? (Layer 3 switching) (Technology

August 22, 2003

Information)

Turner, Keith  
PC Magazine, v16, n20, p269(2)

Nov 18, 1997

ISSN: 0888-8507 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 1216 LINE COUNT: 00100

...ABSTRACT: layer of the OSI reference model, where routers function based on address information used in IP, IPX and other network protocols. A routing switch is much like a conventional router but...

...onto silicon in order to increase performance and lower costs. Many router/switches omit non- IP protocols or complex protocols such as IP Multicast. Flow switching is another method of Layer 3 switching supported by Ipsilon Networks and the ATM Forum. Switched routing is a third approach implemented by leading vendors such...

...Cisco Systems, which calls it Tag Switching, and IBM. It uses a router at the network edge that adds addressing information and another router or switch internally that uses it to determine packet paths.

26/3,K/12 (Item 1 from file: 47)  
DIALOG(R)File 47:Gale Group Magazine DB(TM)  
(c) 2003 The Gale group. All rts. reserv.

05013532 SUPPLIER NUMBER: 19958161 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Tips for...umm...your friends. (simple techniques for using Windows 95 effectively) (Product Support) (Column) (Tutorial)

Seymour, Jim

PC Magazine, v16, n20, p93(1)

Nov 18, 1997

DOCUMENT TYPE: Column Tutorial ISSN: 0888-8507 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 1255 LINE COUNT: 00095

...ABSTRACT: or year, and it is best to use lots of directories to organize data files. The Long Filenames feature in Windows 95 is particularly helpful in making files more mnemonic. Windows...

...files the user does not remember the name of; programs such as PowerHunter index data files and make file location very quick. Many problems stem from outdated video or printer drivers; users should check vendors' Web sites for new drivers to improve display and printing performance. Old, unused programs and fonts should...

...removed from the hard disk, and users should run Scan and Defrag routines frequently. It is always helpful to check the Web for product upgrades and add-ons. An up-to- date emergency boot disk is a necessity.

26/3,K/13 (Item 2 from file: 47)  
DIALOG(R)File 47:Gale Group Magazine DB(TM)  
(c) 2003 The Gale group. All rts. reserv.  
>>>Accession number 5009160 is unavailable

26/3,K/14 (Item 1 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

02133676 SUPPLIER NUMBER: 20158182  
Getting network bandwidth under control. (issues to address before considering backbone upgrades) (Technology Outlook '98) (Technology

August 22, 2003

**Information)**

Lawton, Stephen

LAN Times, v15, n1, p19(1)

Jan 5, 1998

ISSN: 1040-5917

LANGUAGE: English

RECORD TYPE: Abstract

...ABSTRACT: to increase bandwidth need to first conduct a network audit and consider such issues as **locating bottlenecks**, tuning intranet applications, ensuring appropriate network design and optimizing hardware. The IS manager should begin...

...identifying the segments for each desktop and network operating system and protocol. Moving to an **IP** -only environment will require installation of new network devices. Merely throwing bandwidth at a network...

...hog bandwidth and create bottlenecks of their own. The emergence of Layer 2/Layer 3 **routing switches** will **change** many **network** designs. **Another** common bottleneck is desktop hardware that is too slow to keep up with the network.

August 22, 2003

28/3,K/1 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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08441359 Supplier Number: 70870347 (USE FORMAT 7 FOR FULLTEXT)

**Latest telephony and CTI products. (Product Announcement)**

Communications News, v38, n2, p64

Feb, 2001

Language: English Record Type: Fulltext Abstract

Article Type: Product Announcement

Document Type: Magazine/Journal; Trade

Word Count: 1751

... AND LOG all voice and data traffic into and out of the enterprise through a **PBX**. IceMon is a telecommunication intrusion-detection system that protects computer networks against outsider infiltration, as well as insider information leaks executed through an enterprise's **PBX** telecom switch. IceMon monitors dial-up modem, fax and voice sessions passing through the office...

...time alarms in the event of suspicious activity. Archived data can be reconstructed, including TCP/ **IP packets**, making **ascertaining** the nature of the violation possible, as well as providing evidence for disciplinary action or...

28/3,K/2 (Item 2 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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08062803 Supplier Number: 67153230 (USE FORMAT 7 FOR FULLTEXT)

**Voice Over IP Builds Momentum -- TECHNOLOGY HAS OVERCOME ITS EARLY SHORTCOMINGS, BUT SOME QUESTIONS REMAIN UNRESOLVED. (Internet/Web/Online Service Information)**

Sweeney, Terry

InformationWeek, p126

Nov 20, 2000

Language: English Record Type: Fulltext Abstract

Document Type: Magazine/Journal; General Trade

Word Count: 1678

**ABSTRACT:**

Technical improvements have allowed Voice over **IP** (VoIP) to gain popularity. Networking vendors now offer improved gateways and routers designed with VoIP...

...quality does not yet match that of the public telephone network, although many users now **find** it acceptable. **Congestion**, latency and routing delays are potential pitfalls as well. There are now a variety of options available for VoIP implementations, including add-in voice cards for Cisco routers, **IP** telephones on each desktop and **PBX** gateways. Growth remains slower in the enterprise market, partly because port densities are still well under 100 and are not adequate for large corporations. Voice over **IP** can still create unwanted network congestion despite vendor and VAR efforts to alleviate problems. ...

28/3,K/3 (Item 3 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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06720724 Supplier Number: 56252380 (USE FORMAT 7 FOR FULLTEXT)

**Cabletron Systems and Cirilium Partner to Deliver Voice-Over-IP Solutions.**

PR Newswire, p5524

Oct 13, 1999

August 22, 2003

Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 572

... services. Interconnecting via SmartVoice router and switches, SVG utilises a single (UDP) protocol address to **identify IP packets** that contain voice traffic, allowing Cabletron's SSR's to prioritise voice traffic at wire...

28/3,K/4 (Item 4 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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06096143 Supplier Number: 53647939 (USE FORMAT 7 FOR FULLTEXT)  
**NEW WIRELESS COMMUNICATIONS FOR HOMEOWNERS & SMALL BUSINESSES.**

Telephone IP News, v10, n2, pNA  
Feb, 1999

Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 910

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...doing just that with the products we have developed. Small businesses, home offices, telecommuters and **busy** families will **discover** that our products will help them succeed or just make life simpler in the next...

...data jacks. The Controller is a digital voice switch and a router for all TCP/ IP data within the home and to / from the Internet. It also contains three expansion slots...

...The system will also be capable of providing users with voice, data and video over **Internet Protocol (IP)** technology. "Home networking represents one of the most potentially explosive new market opportunities in communications..."

...systems as a business grows. The system transforms a small business telephone system into a **PBX** with standard **PBX** features. Plus, the system is portable. When a company expands into new space, the system...

28/3,K/5 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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15781131 SUPPLIER NUMBER: 100075039 (USE FORMAT 7 OR 9 FOR FULL TEXT

)  
**Troubleshooting IP-PBX systems: live and learn; if experience is the best teacher, everyone's still in school when it comes to IP telephony.**

Brunk, Matthew  
Business Communications Review, 33, 4, 24(7)

April, 2003  
ISSN: 0162-3885 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 4893 LINE COUNT: 00375

... with the pitches and promises of their wares.

No one really wants to sniff and **analyze packets**, but technicians--and even customers--might be persuaded to look at a "dashboard" once in...software based. Do you really think one person is going to master every area of **IP - PBX** installations? Here's a tool worth deploying to your dealers.

Other resources that you probably...know what you are looking at, but the IP-PBX manufacturer should be able to **analyze** these **packets** to **determine** if there is an issue within the **IP - PBX**. Again, expect

August 22, 2003

everyone to be learning as they go. Some issues may elude diagnosis even...

28/3,K/6 (Item 2 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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15555853 SUPPLIER NUMBER: 98032937 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Diagnostic strategies to detect glucose intolerance in a multiethnic  
population. (Original Article: Clinical Care/Education/Nutrition).  
Anand, Sonia S.; Razak, Fahad; Vuksan, Vlad; Gerstein, Hertzel C.;  
Malmberg, Klas; Yi, Qilong; Teo, Koon K.; Yusuf, Salim  
Diabetes Care, 26, 2, 290(7)  
Feb, 2003  
ISSN: 0149-5992 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 3839 LINE COUNT: 00315

... personnel cannot tamper with the system.  
Packet-based eavesdropping poses another challenge, because in an  
IP -based network you don't have to be at an IP -PBX site to capture  
packets. Packet -based eavesdropODS -- We determined the optimum  
diagnostic criteria to identify people with abnormal glucose tolerance  
using fasting plasma glucose...

28/3,K/7 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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14525271 SUPPLIER NUMBER: 83518113 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Voice over IP, veal over linguini: spend \$150 more per restaurant per month  
to go from 56K to T1. Save \$250 eliminating analog POTS lines, route  
intrasite LD over WAN. (Muraskin File).  
Muraskin, Ellen  
Communications Convergence, 9, 8, 98(2)  
August, 2001  
ISSN: 1534-2840 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 1345 LINE COUNT: 00110

... s Business Policy Switch, and BayStack 350 router.  
The new equipment replaced a leased Lucent PBX at headquarters,  
and Cleartrac frame-relay access devices and Lucent Partner key systems at  
restaurant...

...for the ten PSTN lines on the key systems instead. The new BCMs at each  
location convert packetized voice back to TDM on the station side; the  
desktop phones, not IP, are a mixture of "Norstar-like" new digital  
station sets, old Norstar series, and analog...

28/3,K/8 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04701404 Supplier Number: 62986533 (USE FORMAT 7 FOR FULLTEXT)  
Alcatel's OmniCore 5022 backbone routing switch sails through independent  
VoIP tests with flying colours.  
M2 Presswire, pNA  
June 27, 2000  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 755

... expect superior call quality and call volumes regardless of  
whether connections are made with traditional, PBX or IP

August 22, 2003

telephones.whether the backbone is lightly or heavily congested.  
The report stated: "During voice quality...

**28/3,K/9 (Item 2 from file: 636)**  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

03400844 Supplier Number: 47003071 (USE FORMAT 7 FOR FULLTEXT)

**FACTS ON THE COST APPEAL OF INTERNET FAX**

Computer Finance, v7, n8, pN/A

Jan 1, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 3737

... the LAN), three RJ-11 analogue modem ports (for modems, a fax board or server, **PBX**, or the CO), a fax loop start port (to connect a fax machine if desired), one serial port (for configuration only), and a 425MB hard disk. The **IP** /FaxRouter converts fax data into standard TCP/ **IP** packets that behave exactly like any other type of data on the network. The disk is used to store a fax until TCP confirms the delivery of all the **packets**, thus reproducing the **confirmation** aspect of the native fax interface (even though the transmission is not necessarily real-time...

**28/3,K/10 (Item 1 from file: 275)**  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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02328032 SUPPLIER NUMBER: 55670586 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**VOICE OVER IP GATEWAY GEAR FOR DOING IT YOURSELF. (Calista Solo and Workgroup PBXOverIP gateways) (Product Announcement)**

Teleconnect, 17, 9, 73

Sept, 1999

DOCUMENT TYPE: Product Announcement ISSN: 0740-9354 LANGUAGE:

English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 3122 LINE COUNT: 00235

... lets anyone on the PBX contact the lonely staff member at the PBX-less remote **location**. **IP packets** shoot out of the box's 10BaseT interface and onto your ISP or carrier's...

...saving some bucks by avoiding more PVC connections can use the 400 to experiment with **IP**, since InterPrise does RFC1490 **IP** -encapsulation. The 400 supports most of the voice-compression algorithms out there, including G.711...

August 22, 2003

File 15:ABI/Inform(R) 1971-2003/Aug 20  
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File 98:General Sci Abs/Full-Text 1984-2003/Jul  
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File 674:Computer News Fulltext 1989-2003/Aug W3  
(c) 2003 IDG Communications  
File 9:Business & Industry(R) Jul/1994-2003/Aug 21  
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File 370:Science 1996-1999/Jul W3  
(c) 1999 AAAS  
File 369:New Scientist 1994-2003/Aug W2  
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File 810:Business Wire 1986-1999/Feb 28  
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File 636:Gale Group Newsletter DB(TM) 1987-2003/Aug 21  
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File 484:Periodical Abs Plustext 1986-2003/Aug W3  
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File 647:cmp Computer Fulltext 1988-2003/Jul W4  
(c) 2003 CMP Media, LLC  
File 20:Dialog Global Reporter 1997-2003/Aug 22  
(c) 2003 The Dialog Corp.  
File 696:DIALOG Telecom. Newsletters 1995-2003/Aug 21  
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File 634:San Jose Mercury Jun 1985-2003/Aug 21  
(c) 2003 San Jose Mercury News  
File 553:Wilson Bus. Abs. FullText 1982-2003/Jul  
(c) 2003 The HW Wilson Co  
File 635:Business Dateline(R) 1985-2003/Aug 22  
(c) 2003 ProQuest Info&Learning

Set	Items	Description
S1	38808	PBX OR PRIVATE()BRANCH?()EXCHANGE?
S2	347641	VOICE()OVER()INTERNET OR INTERNET()PROTOCOL? OR IP OR IPN
S3	16619276	FIND? OR ANALY? OR EXAMIN? OR ASCERTAIN? OR ASSESS? OR CHE- CK? OR CHEQUE? OR CONFIRM? OR DEDUC? OR DETECT? OR DETERMIN? - OR DISCERN? OR DISCRIMINAT? OR DISCOVER? OR IDENTIF? OR LOCAT? OR PINPOINT? OR RECOGNI?
S4	3949605	CONGEST? OR CLOG? OR BOTTLENECK? OR PACK? OR BUSY? OR BACK- ?()UP
S5	8815610	SWITCH? OR CHANG?, OR ADAPT? OR ADJUST? OR ALTER OR ALTERAB- LE OR CHANG? OR MODIF? OR READJUST?
S6	8953933	ALTERNAT? OR ANOTHER OR DIFFERENT? OR OPTIMAL?
S7	12100967	ROUT? OR PATH? OR LINE? OR NETWORK? OR TRACK? OR CHANNEL?
S8	68114	(CALL? OR SWITCH? OR TRAFFIC?) ()CONTROL?
S9	2793	VOICE(3N)CONVERT?
S10	11366	REAL()TIME(2N)TRANSPORT? OR RTP
S11	90680	S3(3N)S4
S12	11538	S5(3N)S6(3N)S7
S13	57	S11(S)S12
S14	16	S13(S)S2
S15	0	S13(S)S1
S16	0	S15 NOT S14
S17	0	S13(S)S8
S18	0	S17 NOT S15
S19	0	S13(S)S9
S20	0	S13(S)S10
S21	28	S1(S)S2(S)S11
S22	28	S21 NOT (S18 OR S15)
S23	283	S1(S)S2(S)S8
S24	4	S23(S) (S9 OR S10)
S25	4	S24 NOT (S22 OR S18 OR S15 OR S14)
S26	14	RD S14 (unique items)
S27	25	RD S22 (unique items)
S28	25	S27 NOT S26

August 22, 2003

S29

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August 22, 2003

21/3,K/1 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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01709574 03-60564

**Vox rocks**

Ronde, David  
Network World v15n39 PP: 75-76 Sep 28, 1998  
ISSN: 0887-7661 JRNL CODE: NWW  
WORD COUNT: 2273

...TEXT: calls to route over a highspeed data WAN via ATM, which to offer up via IP and which to send over the public switched telephone network. If IP trunking is one of the three options utilizing ARS and AAR, the PBX software takes an additional step. It pings to determine the congestion on the IP network for each call, according to Marissa Russotto, Lucent's offer manager for Definity ECS...PBX and voice messaging systems you paid a pile of money for, you'll probably find safe, new packetized voice options long before Wall Street discovers you're never going to send your CEO...

21/3,K/2 (Item 1 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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106431

**Cisco learning to roll with the punches**  
Byline: PHIL HOCHMUTH AND JIM DUFFY  
Journal: Network World Page Number: 1  
Publication Date: May 19, 2003  
Word Count: 2233 Line Count: 198

Text:

... move into new markets as well as expand its presence in storage, security, wireless and IP telephony. But some observers say Cisco really needs to scramble to reinvent itself as the...

... in both areas - the company is looking for new markets to conquer, with voice over IP (VoIP), wireless, security and storage being on the short list. Chambers says each of these...

...over many customers. Cisco's AVVID products represented more than 50% of the market for IP phones and PBX revenue in the fourth quarter of 2002, according to Synergy Research. "I was a little...

... it makes sense," because the industry is moving to converge data, voice and video to IP. Cisco's security and wireless products also have climbed to the top of their respective...

... Channel platform. While WLAN, VoIP and security all are intertwined in some way with core IP background, the storage market represents uncharted waters for the network giant. "Our interactions with Cisco have been around routers, switches and IP phones," says Jon Beyman, CIO of Lehman Brothers, the New York brokerage firm. "[But storage...

... resale deals with EMC, Hitachi, HP and IBM to resell its MDS 9000 storage switch. IP commoditization Despite having its core markets wrapped up and strong momentum from its growth enterprise...off. SBC is purchasing Cisco's 12000 series Internet Routers for a nationwide OC-192 IP backbone network that is intended to transport services such as Dedicated Internet Access and SBC...

... DSL. Cisco is also now the preferred provider for specific SBC managed service products, including IP telephony, IP VPNs, security, storage

August 22, 2003

networking and WLANs. Sprint has upgraded its SprintLink IP network to support a Cisco technology called Layer 2 Tunneling Protocol Version 3. The technology...

... and operational costs, such as the development of operational support systems and provisioning scripts for IP / packet networks; and identifying profitable applications and services for these nets. Once these barriers are broken down, Cisco's...

21/3,K/3 (Item 2 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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103324

**Quality question remains for VoIP**

Byline: PHIL HOCHMUTH

Journal: Network World Page Number: 1

Publication Date: October 07, 2002

Word Count: 1322 Line Count: 115

Text:

Is the voice in voice over IP good enough to bet your business on? That's the make-or-break question for...

... would be a phone order from going awry because of poor sound quality over an IP link. Still, the potential cost savings are strong enough that Armstrong is willing to give...

... shot for certain applications. The company is planning to test an internal campus-to-campus IP telephony deployment before delving deeper into the technology. Quality measurement In a recent Network World...

...QoS) assurance on corporate networks. Almost half of those surveyed said that the quality of IP voice was a drawback. With voice quality being such a sticking point, the trick is...

...toll-quality VoIP. Some experts say there are hard tests and metrics for proving an IP telephony system, while others say the process is more art than science. Factors that might diminish the quality of an IP phone conversation rarely lie in the actual VoIP gear anymore, says Mike Hommer, manager of...

...Now that's down to about 10%, he says. "The quality issues - as far as IP voice equipment being able to efficiently encode and decode voice - have become less of a...

... packetized voice traffic, Hommer says. The result of latency is jitter, which can cause an IP voice conversation to break up. Most IP voice products have jitter buffering technology or other technology that smoothes out and reorders voice packets before turning them into audio, but sometimes excessive network latency cannot be overcome. **Packet analyzers** and port mirroring applications can be used to measure IP traffic volume and patterns to determine the sources of latency on a LAN or WAN...

... in testing tools from vendors such as Agilent, Empirix, Finisar and NetIQ for checking out IP voice equipment and network performance. Hommer says these tools are useful but don't always...

... people say," says Matthew Liste, practice manager for ThruPoint, a network consultancy that specializes in IP telephony technology. He recently completed an IP telephony project for Merrill Lynch where more than 1,000 Cisco IP phones were deployed at a site in New Jersey. He says enlisting the help of employees can be useful in determining whether an IP PBX system or LAN needs fine-tuning. "If you put [ IP ] phones out and ask people to occasionally write down the quality of their calls [on...

August 22, 2003

there," Liste says. The advantage in that is minimal disruption to employees, he adds. Another IP telephony consultant takes a more general approach. "You can buy a lot of expensive equipment..."

... year, members of The Seattle Times' communications and IT staffs said they initially experimented with IP phones on an existing infrastructure consisting of shared 10/100M bit/sec Bay Networks hubs...

... said Paul DeWees, a network systems analyst. At the Paulding School District in Georgia, Alcatel IP phone equipment was tested in a lab before phones and switches were deployed to 23....

... system running over LANs at the schools and connected by a fiber-optic, Gigabit Ethernet IP backbone. "To test the voice quality, we pretty much just played it by ear," says...

... the school district. "We did some live calls in a lab setup, with the new IP phones right next to the phones we had in place." Ragsdale says the calls sounded comparable between the circuit-switched and IP gear, and the deployment went fairly smoothly except at one school where some older LAN...

21/3,K/4 (Item 3 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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100803

**ADOMO BOLSTERS SPEECH-RECOGNITION PRODUCT**

Byline: ? BY ELLEN MESSMER  
Journal: Network World Page Number: 38  
Publication Date: May 06, 2002  
Word Count: 446 Line Count: 40

Text:

CUPERTINO, CALIF. - Adomo, whose speech- **recognition package** lets users check Microsoft Outlook e-mail via phone, is adding a way for business users to place...

... 000 for 50 to 100 users, is a server appliance that plugs into a corporate **PBX** and corporate LAN for access to a local Exchange server. Using a phone, a user...

... enterprise sales at Ericsson. Earlier, the two founded TouchWave, a start-up whose voice-over- IP gateway was sold to Ericsson, which markets it as the WebSwitch. Adomo has been easy...

21/3,K/5 (Item 4 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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099507

**VoIP advances**

**Avaya, 3Com, Mitel to unveil IP telephony gear.**  
Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: February 25, 2002  
Word Count: 1267 Line Count: 113

Text:

WASHINGTON, D.C. - Enterprise voice over IP will gain momentum this week at the VoiceCon show, where vendors from the old and new worlds of telecom will introduce products that could help IT professionals scale IP **PBX** systems to new heights and improve voice-over- IP network management.

August 22, 2003

Avaya will make a splash with seven new products in its Enterprise Class IP Systems (ECLIPS) line, launched in 2000 when the company spun off from Lucent. The most...

... the new wares are Linux-based Media Servers that can support up to 12,000 IP phones, 20 times the number on Avaya's previous top-line IP PBX, the IP 600. Avaya also will unveil a voice-over-IP gateway designed to keep phone lines up in the event of an IP WAN failure at remote offices; client/server software for turning 802.11b-based handhelds into IP phones; and an application for measuring IP voice bandwidth. 3Com and Mitel will also show new voice-over-IP wares that promise easier quality-of-service (QoS) deployment, and a multitude of new IP phones and conferencing stations for corporations. This bevy of IP voice gear comes as IT managers have become less skeptical of IP telephony's reliability and more aware of the potential cost savings and application benefits of...

... showed that 44% of U.S. businesses with more than 500 employees have started implementing IP telephone systems in some area of their corporations. The study, produced by market research firm Infotech, says these implementations are mostly in branch offices or new facilities rather than central PBX replacements. Infotech analyst Frank Stinson says the adoption of voice over IP will increase in the next few years as businesses that purchased new PBXs or PBX upgrades in 1999 - in preparation for Y2K - will look to replace those systems, with 87% of companies expected to implement some voice over IP by 2004 (see chart). "Telecom will definitely become more servercentric and IPcentric," as opposed to centralized, circuit-switched PBX systems, says Mark Katsouros, a communications automation specialist at the University of Maryland in College Park. IP telephony products from Avaya and Cisco are deployed in several areas on campus, Katsouros says, but the school's main system is still an Avaya Definity PBX. "It will be a while until everything becomes voice over IP," he adds. "We have a huge investment in traditional telephone equipment, and we have to integrate [voice over IP] slowly." In new buildings on campus where voice over IP will be deployed, Katsouros says the school anticipates saving thousands of dollars on wiring and...

... by deploying a single network for voice and data. "Anyone not considering deploying [voice over IP] is foolish because it will be here eventually," he says. Avaya gears up IP PBXs Avaya's new IP PBXs include the S8700 and S8300 Media Servers, Avaya's first Linux-based IP phone servers targeted at the enterprise core and remote offices, respectively. The S8700 will become Avaya's flagship IP PBX, with support for up to 12,000 users per server, an increase from 600 on...

... at a central site or branch office, but act as a single system - or "virtual PBX" - in terms of management, features and dial plan. The G700 also can be fitted with...

... analog modules for connecting to the public switched telephone network in the event of an IP WAN failure, with the S8300 blade providing full IP PBX functions and features. While Avaya says it will continue to market the IP600 and the Remote Office 300 IP PBXs, the company indicates that the new Media Servers will be the company's premier IP PBX platform going forward. Avaya says a key technical change in its ECLIPS products is the...

... makes the servers more stable and scalable than its previous Windows-based ECLIPS products. Competing IP PBXs such as Cisco's CallManager and Nortel's Business Communication Server use Windows-based operating systems that run the companies' IP call control software. One user of Cisco's CallManager says that he'd like to see more Linux in IP telephony equipment in general. "The reason [Cisco] goes with a Windows-based operating system on its [voice-over-IP product] is to be first to market," says Patrick Olson, CIO at Menlo College in Atherton,

August 22, 2003.

Calif. Olson has used Cisco's voice-over- IP gear for several years with few complaints, but says he would like a more stable operating system, such as Linux, on his IP PBXs. The S8700 will start at around \$870 per user for a 1,000-user system. The G700 gateway and S8300 IP PBX blade will cost around \$1,000 per user. Both products will be targeted at branch-office users. Avaya has also adapted its Definity PBX call-processing software, renaming it MultiVantage and porting it to its new Linux-based platform...

... runs on the IP600 and Avaya's proprietary Unix system that runs on Avaya's PBX. On the client side, Avaya is introducing software that can be installed on any wireless...

...based handheld - with support for a microphone and headphones - allowing it to become an ECLIPS IP phone. The server software, which can run on the MultiVantage PBX or IP PBX platforms and registers the handheld with a phone extension, provides all call-control features to...

... from Avaya, which for the first time will let users see what percentage of their IP traffic is voice packets vs. other applications. This could be helpful for identifying network bottlenecks that could affect voice quality, the company says. \*Avaya's G600 media gateway, for connecting a central site ECLIPS IP PBX or Definity PBX to a WAN. \*Seven new IP endstation products from Mitel, which can be used to connect to an IP-enabled Mitel PBX over a network connection. New handsets include the 5010 and 5020 IP Phones for enterprise desktops and the lower-cost 5001 and 5005 IP Phones (which cost less than \$200) for high-volume phone deployments where minimal phone features are required. \*Mitel will also introduce its 5140 IP Appliance, which adds a screen for Web browsing to its IP phone. The company will also showcase its 5300 series IP conference devices, which could be used by a company with remote offices to conduct teleconferences...

... service fees. \*New QoS features on 3Com's SuperStack 4400 policy switches and its NBX IP PBX will allow the Layer 4 switch to autodetect an NBX on a network and configure...

... through a management application if more or less QoS configuration is required. \*3Com's SoundStation IP 3000 - 3Com NBX, an IP conferencing station based on SoundStation IP hardware from PolyCom, is also available for companies that want to conduct conference calls over...

21/3,K/6 (Item 5 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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099457

How we did it

Journal: Network World Page Number: 46  
Publication Date: February 25, 2002  
Word Count: 412 Line Count: 37

Text:

... average of at least six ratings made by at least three experienced Miercom voice-over- IP lab testers. In rotation, testers conducted real-time, two-way conversations and special tests, over separate voice-over- IP connections, between two PCs running the soft phone under test, one installed on the Compaq...

... directions. All vendors participating in this test were required to provide and technically support the IP - PBX or server-based voice-over- IP equipment on which the soft phone operated during the tests. (See an online list of...

...on the back-end systems, so the media is already set up as voice-over-

August 22, 2003

IP traffic when it gets there. In assessing soft phones, we set up our test plans...  
... of those runs to represent the final score. We used an Agilent Internet Advisor protocol **analyzer** to capture **packets** to verify coder/decoders, analyze the boot process and complete calls between soft phones.

21/3,K/7 (Item 6 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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098937

AVAYA TO MELD VPNS AND VOIP  
NEW GATEWAYS TO PRIORITIZE VOICE ON VPN LINKS.  
Byline: TIM GREENE  
Journal: Network World Page Number: 8  
Publication Date: January 28, 2002  
Word Count: 569 Line Count: 49

Text:

... A SPLASH THIS WEEK AT COMNET 2002 BY PUSHING VOICE CAPABILITIES INTO A SMALL-SITE IP VPN APPLIANCE, A MOVE THAT COULD HELP ENTERPRISE CUSTOMERS SAVE MONEY ON BRANCH-OFFICE TELEPHONE BILLS. BY IDENTIFYING VOICE PACKETS AND TAGGING THEM FOR TOP PRIORITY, THE NEW VSU-5 SETS THE STAGE FOR TYING...

... TELECOMMUTER OFFICES TO CORPORATE PBXS VIA SECURE VPN LINKS. THIS SUPPORT WOULD GIVE REMOTE OFFICES PBX PHONE FEATURES AND ACCESS TO THE PUBLIC TELEPHONE NETWORK OVER PBX TRUNKS TO A LOCAL PHONE CARRIER. REGULAR PHONE LINES TO REMOTE OFFICES COULD BE REDUCED...

... IT PRECONFIGURES VSU-5 AND A LARGER NEW VPN APPLIANCE CALLED VSU-10000 TO SUPPORT IP PHONES MADE BY AVAYA AND CISCO. THIS ENSURES THAT VPN GATEWAYS RECOGNIZE PRIORITIZATION TAGS THAT...

...OF VOICE AND DATA ON VPNS, USERS SHOULD BE AWARE THAT THE RELIABILITY OF AN IP VOICE NETWORK MIGHT NOT BE ON PAR WITH THAT OF TRADITIONAL PUBLIC PHONE NETWORKS. SO IF THEY USE THE VOICE-OVER- IP OPTION, THEY MIGHT WANT TO KEEP A REGULAR PHONE LINE TO USE IN CASE OF AN IP OUTAGE, KOSIUR SAYS. WITH 2M BIT/SEC OF TRIPLE-DES THROUGHPUT AND SUPPORT FOR FIVE...

... THE REMOTE ACCESS DEVICE, AND SUPPORTS PPP OVER ETHERNET. TO RUN VOICE OVER THE VPN, IP PHONES WOULD BE PLUGGED INTO BRANCH-OFFICE LANS AND WOULD CONNECT OVER A VPN LINK TO AN AVAYA DEFINITY PBX AT A HEADQUARTERS SITE. FROM THERE, CALLS COULD BE ROUTED TO OTHER PHONES ON THE...

21/3,K/8 (Item 7 from file: 674)  
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092365

THE HOWARD  
Industry luminary Howard Anderson picks the top network products and technologies of the past 15 years.  
Byline: HOWARD ANDERSON  
Journal: Network World Page Number: 79  
Publication Date: March 26, 2001  
Word Count: 1731 Line Count: 157

Text:

...upgrade their PBXs and let managers use the telephone as a nonreal-time device. The PBX never fulfilled its promise as an intercompany data-switching device, but it did start the...

August 22, 2003

... control system and a byproduct of network control was interesting new applications such as automatic **identification** of dialing.\* **Packet** switching. Behind LANs, behind ATM, routers, switches and the Internet, stands packet switching. More money... The first commercially viable carrier-class replacement for a Class 4 switch exploiting voice-over- IP technology. How the industry let Sonus sneak in and garner the market is going to...

...mail, e-mail and streaming media. The applications clogged the networks, so we had to **find** solutions, such as **packet** switching and protocols, which worked to increase availability and reduce cost which led to even

...

21/3,K/9 (Item 8 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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092011

**Vendors pass VoIp interop hurdle**  
But **gateway-to-gateway** problems persist, and configuration remains difficult.

Byline: BETSY YOCOM, UWE BILGER, ROB SMITHERS AND MICHAEL HOMMER, NETWORK WORLD GLOBAL TEST ALLIANCE

Journal: Network World Page Number: 45

Publication Date: March 05, 2001

Word Count: 2505 Line Count: 239

Text:

In a groundbreaking public display of voice-over- IP interoperability, nine vendors tried to prove their convergence hardware and software could work together to...

... World and its Global Test Alliance partner Miercom last month, these vendors of voice-over- IP gateways and gatekeepers, IP phones, soft phones and IP PBXs demonstrated basic levels of interoperability. They successfully placed calls with each other at "toll..."

... have to choose one vendor or the other to provide all of your voice-over- IP infrastructure gatekeepers. Many of the 2,000-plus ComNet 2001 attendees who visited the interoperability lab entered skeptical, but left convinced that voice-over- IP vendors are achieving interoperability that might soon translate into multivendor converged networks in the real

...

...a bidirectional call based on the standards "slow start" procedure. The challenge Miercom's voice-over- IP research in the past two years has shown that while many vendors claim interoperability, few...

... behind closed doors. Late last year, Network World issued an editorial challenge to voice-over- IP vendors to go public. Miercom's initial call for products, based on H.323 Version...

...which provided the "reference" gatekeepers for the test bed, as well as other voice-over- IP equipment; HearMe, Memotec, Oki, Polypix, Quintum, Siemens and Sitara. Each sent equipment (see story, page...demand, but this creates incompatibilities that may require minor recoding in a multivendor voice-over- IP environment. This is what makes out-of-the-box interoperability based on H.323 so...

...complete fast start with the Clarent gatekeeper because its transmitting side did not have an IP address and Real-Time Protocol/Real-Time Control Protocol port numbers that the Clarent gatekeeper...

... be set up using the slow-start procedure. Engineers working on the problem completed several **packet** traces to **determine** the cause, but

August 22, 2003

left the prestige still unable to complete calls via slow start. Some...  
... network. The bits are decoded back to PCM speech at the receiving end. Voice-over- IP gateways and IP phones support a certain amount of vocoders, but different vendors' support varying numbers and types...

... T's T.38 standard for fax transmissions. Based on our experiences testing voice-over- IP systems, this is a significant achievement. More than half of the voice-over- IP gateways we've tested recently have failed this faxing test. It's a challenge for voice-over- IP systems to recognize fax encoding and respond to it because they have trouble distinguishing between...

... among the participants and the ComNet attendees who visited the lab was that voice-over- IP interoperability based on H.323 has come a long way in the past six months...

... attempts, only six calls failed - a 99.9984% call-completion rate. Many single voice-over- IP gateways tested privately at Miercom's Labs haven't done as well. Siemens optiPoint 300 Advance IP phone was perhaps the most out-of-the-box-ready product, able to work with...is impaired. But to be fair, we didn't test the optiPoints against any similar IP phones in this round of testing, which may deliver similar performance delays. Despite many long hours of tracing packets and analyzing code, several vendors were unable to resolve lingering incompatibilities. For example, when operating in the...

... had no trouble communicating bidirectionally with Quintum's Tenor gateways and Siemens' optiPoint 300 Advance IP phones in the same network. Quintum's Tenor gateways also could not communicate with Memotec

...

... incompatibility in the Fast Connect procedure. Avaya also could not resolve incompatibilities between its IP600 ( IP PBX ) and the Quintum gateway, possibly due to routing problems. Nuera planned to demonstrate its new...

... the product was damaged in transit and could not be integrated into the voice over IP test bed. So where do we go from here? For starters, Cisco and Clarent acknowledge gatekeeper-to-gatekeeper incompatibility issues constitute the "next phase" in voice-over- IP interoperability testing. We expect to see the leading vendors in this area - Cisco, Clarent and...

...lead to more widespread dissemination of documentation that will outline specific incompatibilities among voice-over- IP equipment - and the means to solve them. More agreement in the standards bodies as to...

21/3,K/10 (Item 9 from file: 674)  
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091857

Vendors pass VoIp interop hurdle  
But gateway-to-gateway problems persist, and configuration remains difficult.

Byline: BETSY YOCOM, UWE BILGER, ROB SMITHERS AND MICHAEL HOMMER, NETWORK WORLD GLOBAL TEST ALLIANCE

Journal: Network World Page Number: 45

Publication Date: March 05, 2001

Word Count: 2505 Line Count: 239

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August 22, 2003

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August 22, 2003

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21/3,K/11 (Item 10 from file: 674)  
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088565

**VoIP to carry 'bandwidth tax'**  
Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: October 30, 2000  
Word Count: 1113 Line Count: 100

Text:

Voice over IP 's dirty little secret is that it can be a bandwidth hog. Observers warn that customers looking to use voice over IP had better plan to significantly bolster bandwidth and look hard at voice compression technology before making a commitment. While money can be saved with voice over IP by skirting intracompany long-distance charges and consolidating voice and data WAN circuits, users should...

...much as two-thirds of a T-1 line's bandwidth can be consumed by IP overhead - headers and error correction bits - depending on the type of voice-over- IP codec used. Standard speech-encoding algorithms, or codecs, are defined by the International Telecommunication Union...

... little 16K bit/sec and 8K bit/sec. Most corporate- and carrier-class voice-over- IP equipment, including gateways, IP phones, IP PBXs and videoconferencing equipment from vendors such as Cisco, Nortel Networks and Lucent, employ these...

... transmit packetized voice signals over data networks. When choosing a codec for your voice-over- IP network, it is important to consider how your compression method will affect the ratio of IP packet overhead data to actual voice frames per packet, says Scott Hamilton, IP telephony track manager for Tolly Research in Manasquan, N.J. Tolly Research recently measured the...

...voice T-1 circuit). That means 46K bit/sec of a T-1 is consuming IP overhead. "Users should not assume that allocating a T-1 equivalent for G.711 voice over IP on their data network will be sufficient," Hamilton says. "It's going to be close..."

... Research found that compressed G.728 and G.729a traffic was also bogged down by IP packet overhead. In all three codec tests, the group found that up to 80% of the bytes in the voice packets consisted of IP packet overhead. "If someone picks G.728 and thinks they're going to get four...

... to banks, is rolling out a Cisco Architecture for Voice Video and Integrated Data (AVVID) IP telephony system. Ahmad Sidani, a senior network engineer for the firm, says that in addition...

August 22, 2003

... standard he will use. "Once we identify exactly what the pattern of the voice-over- IP application is going to have, we can then go and identify which codec's compression..."

...want," Sidani says. T-1 lines will be used to connect AVVID call servers and IP phones in the branch offices to a PBX in its Santa Ana, Calif., headquarters, Sidani says. Although he would like to use G...

...and voice needs are going to be different in each office. "Remembering to factor in IP packet overhead when voice is packetized is something that can be overlooked by some users, says Brian Dal Bello, manager for Nortel's Succession enterprise voice-over- IP product line. If miscalculated, this can sometimes erase any planned cost savings of a voice-over- IP rollout, he adds. "When voice over IP goes into an enterprise, people have to understand all the variables that can affect their..."

... rate and calculate if they're actually saving bandwidth or money by using voice over IP, " instead of traditional voice, he says. From the deployments Dal Bello has seen with customers...

... 711 in LANs where bandwidth is plentiful and G.729 for WANs. Other voice-over- IP equipment vendors are working to unload the inherent baggage that accompanies voice-over- IP packets. "If you can aggregate packets and put a common address in front of them, you can reduce the overhead associated with sending voice over an IP network," says Heidi Bersin, marketing vice president for Clarent, a maker of carrier and enterprise voice-over- IP gateways. "It's sort of like the multiplexing of packets." Clarent uses proprietary technology it calls ThruPacket, which sends voice-over- IP packets along as links in a chain instead of each packet having its own addressing is inserted into each packet in a ThruPacket chain, which identifies the packet as a chain "link." Only the lead packet in the chain contains the IP packet overhead data including Ethernet and IP addresses that can cause congestion and latency in normal voice-over- IP networks. ThruPacket is present in the company's carrier-class Gateway 400 and 1200 and...

... 100 for firms. Some network professionals would prefer to avoid the problems with voice over IP and use other technologies for converging voice and data, such as ATM. "I still say..."

... Sphericall equipment in eight remote offices via T-1 lines. Hays is looking into an IP version of the Sphericall product, but is not rushing to replace ATM with IP for his long-distance telephone trunks. "You can get a lot of latency on your voice network just because of the IP characteristics," he says. "I don't know if there is a good way you can..."

21/3,K/12 (Item 11 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

086478

**Megaco to bridge PSTN, IPnetworks**  
Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 646 Line Count: 57

Text:

... fax and multimedia calls to be switched between the public switched telephone network and emerging IP networks. Megaco stands for Media Gateway Control. A joint activity of the International Telecommunication Union...

... analogous role in capturing requests for address and enhanced service

August 22, 2003

information by enabling retrieval via IP from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber-related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in a company. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office then sends an SS7 message to a signaling gateway in order to

...

... used to provide an end-to-end connection via the long-distance service provider's IP network to the end destination. At this point, the MGC is aware of both a...

... is set up with two terminations, a switched termination on one side and a packetized IP termination on the other. To provide the flexibility to check for calls other than voice...

... gateways into fax-compatible modes, and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed, delivering a document across the hybrid network. The Megaco call **discrimination package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

... applications of phone service over hybrid phone networks that will contain a mix of switched, IP and ATM technology. Rafferty is senior product manager for IP telephony at Brooktrout Technology. He can be reached at [jraff@brooktrout.com](mailto:jraff@brooktrout.com).

21/3,K/13 (Item 12 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

086477

**Megaco will bring circuit and packet networks together**

Byline: JAMES RAFFERTY

Journal: Network World Page Number: 49

Publication Date: August 14, 2000

Word Count: 684 Line Count: 60

Text:

... as voice, fax and multimedia calls to be switched between the traditional network and emerging IP networks is called. Megaco stands for Media Gateway Control. A joint activity of the International...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via IP from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office then sends an SS7 message to a signaling gateway, in order to...

... used to provide an end-to-end connection via the long-distance service provider's IP network to the end destination. At this point, the MGC is aware of both a...

... is set up with two "terminations," a switched termination on one side and a packetized IP termination on the other. To provide the flexibility to check for calls other than voice, the MGC may set up the media gateways to do "call discrimination," using a call **discrimination package**. This

August 22, 2003

enables a MGC to gather information needed to identify the media type for a  
...

...swiftly take action, place both media gateways into fax compatible modes (using the fax and **IP** fax packages), and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

...of phone service over a hybrid phone networks that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for **IP** telephony at Brooktrout Technology. He can be reached at ...TK

21/3,K/14 (Item 13 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

086457

**Megaco protocol to bring circuit ...**

Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 850 Line Count: 74

Text:

... as voice, fax and multimedia calls to be switched between the traditional network and emerging **IP** networks is called Megaco/H.248. Megaco stands for Media Gateway Control. A joint activity...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via **IP** from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office in the local loop then sends an SS7 message to a signaling...

... used to provide an end-to-end connection via the long-distance service provider's **IP** network to the end destination. At this point, the MGC is aware of both a...

... is set up with two "terminations," a switched termination on one side and a packetized **IP** termination on the other. In order to provide the flexibility to check for calls other...

... media gateways so that they will do "call discrimination." This is accomplished using a call **discrimination package**. This enables a MGC to gather information needed to identify the media type for a...

...swiftly take action, place both media gateways into fax compatible modes (using the fax and **IP** fax packages), and a normal fax session can take place. From this point, the call **discrimination package** will be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls which are in common...

... of phone service over a hybrid phone network that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for

August 22, 2003

IP telephony at Brooktrout Technology. He can be reached at ...TK

**21/3,K/15 (Item 14 from file: 674)**  
DIALOG(R)File 674:Computer News Fulltext  
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075423

**Moving toward convergence**  
AltiGen's PC-based PBX bets your phone system on NT.  
Byline: Douglas Spindler  
Journal: Network World Page Number: 73  
Publication Date: June 21, 1999  
Word Count: 740 Line Count: 68

**Text:**

... Communications' AltiServ, a Windows NT-based telephone and voice mail system. AltiServ is a combination PBX, voice mail and messaging system housed in a single NT server. With the addition of AltiWare IP, telephone calls can be routed over an IP network to another AltiServ server. While AltiServ Open Edition (OE) 2.1 has been on...

...market since late last year, we now think it warrants closer examination because it blends PBX, PC and messaging technologies into one system, and it costs anywhere from 30% to 75...

...is limited to 144 users per server because the system uses ISA slots for the PBX /voice mail functionality and PCI slots for voice over IP. We first tested AltiServ with voice traffic only. Our users reported the system was easy to use, and their voices were clear and easily recognizable. Next, using a packet generator we placed a moderate network load across our pseudo-WAN link. Conversation quality degraded...

... so we configured the routers to use Priority Queuing (packet prioritization) for the voice-over- IP packets. Sure enough, voice quality returned to its previous level. In the version of AltiWare IP we tested, the bandwidth requirements for voice over IP were surprisingly large compared to competitors' voice-over- IP products. AltiWare IP requires 96K bytes per channel whereas other voice-over- IP products that support compression require only 10K to 20K bytes per channel. AltiGen is expected to release a new version of AltiWare IP this fall that will support compression. Because users are accustomed to 24-7 telephone uptime...

**21/3,K/16 (Item 15 from file: 674)**  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

069185

**Vox Rocks**  
Data traffic is growing by leaps and bounds, but new opportunities in voice - yup, voice - networking are shaking up the market.  
Byline: David Rohde  
Journal: Network World Page Number: 75  
Publication Date: September 28, 1998  
Word Count: 2149 Line Count: 192

**Text:**

... of Wall Street or the venture-capital corridors of Silicon Valley. There the buzzword is IP telephony, with much of the attention going to newly emerging carriers that are proposing to scrap circuit switching in favor of IP multimedia end to end. And make no mistake: IP telephony is not a theory - it's actually being used. The question is, By whom...

...family and friends in their native countries. Some of these carriers are

August 22, 2003

building global shared IP virtual private networks (VPN) to carry voice traffic without nailing up circuits. Others are doing...

... to domestic business telephony, users' widespread complacency about cheap rates is making it difficult for IP telephony carriers to build a business case.. Even residential users now commonly get a rate...

... switched calls from major carriers - 9 cents for users who agree to credit card billing. IP telephony rates - which all seem to track what Qwest Communications charges for its Q.talk...

... get 7 cents or less in negotiated contracts. And the fast pace at which domestic IP telephony carriers are chewing up capital as they build out their networks means that their...

... can't build a sustainable business case around the idea of offering cheap voice-over- IP telephone calls, says Karyn Mashima, vice president of data networking systems at Lucent. "In fact, right now, it costs the carriers more to provide voice over IP than traditional calls," she says. Real savings The real savings appear to be found not...Hanssen says. MCI WorldCom is in the process of developing a managed V-FRAD service. IP invades the PBXsAnother new option in voice networking is coming from PBX vendors and is best for users who are considering IP -based VPNs as an alternative to voice over frame relay. This option, called PBX IP trunking, takes advantage of the special call-routing features of a PBX system, such as hold, conference and transfer, while saving money by chopping out carrier tolls...

... developed so far is from Lucent, which by year-end will have a triple-threat PBX in place - one that gives network administrators a choice of ordinary time-division multiplexing (TDM), ATM switching and IP telephony all in one box. Here's how it works: Lucent's flagship Definity Enterprise...

... optional ATM circuit pack for Definity's Center Stage, essentially the switching fabric of the PBX . That was followed this year by optional IP trunking, a 24-port card for the Universal Port Carrier shelf. Now users can have TDM, ATM and IP all in the same voice box. Why use all three options? The answers center around...

...to route over a high-speed data WAN via ATM, which to offer up via IP and which to send over the public switched telephone network. If IP trunking is one of the three options utilizing ARS and AAR, the PBX software takes an additional step. It pings to determine the congestion on the IP network for each call, according to Marissa Russotto, Lucent's offer manager for Definity ECS...

... for voice, she says. Don't forget voice mailMany users who have no interest in IP telephony may unwittingly find that they get involved anyway through voice mail. The Electronic Messaging...

... almost no thought given to routing messages beyond one building or campus. VPIM uses the IP stack's Simple Mail Transfer Protocol and Multi-purpose Internet Mail Extensions protocols to encodeVPIM is an IP telephony store-and-forward technology," says Bern Elliot, a Philadelphia-based independent consultant who is...

... have a telephone keypad for your inputs."So the next time someone touts voice over IP and you get the jitters about it, stop and think about what you already have...

...that frame relay carrier contract that's due to run for a while and the PBX and voice messaging systems you paid a pile of money for, you'll probably find safe, new packetized voice options long before Wall Street discovers you're never going to send your CEO...

August 22, 2003

21/3,K/17 (Item 1 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
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3488267 Supplier Number: 03488267 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
VDI--pulling together: integrating voice and data over a single network has been vaunted as the way ahead for years--but how many UK corporates have yet to make the leap of faith required even to push their internal voice traffic over their own LAN? Philip Hunter looks at both sides of the VDI story to see if at last they are pulling together. (Telecoms) (Cover Story)

(Voice-data integration)

Communicate, p 19(3)

June 2002

DOCUMENT TYPE: Journal; Cover Story; Industry Overview ISSN: 1352-0040 (United Kingdom)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 2719

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...purely at Layer 2 and are therefore incapable of acting on Layer 3 information within IP packet headers. This means they cannot identify voice packets, and so cannot give them the priority they need to ensure they are delivered within...

...is no longer an issue with recently installed Layer 3 switches, which are capable of identifying and prioritising IP packets. But to muddy the waters further, some sites have a mixture of Layer 3 switches...

...that return on investment (ROI) calculations will depend heavily not just on where the existing PBX lies on its lifecycle curve, but also on the capabilities of the LAN switching equipment...

...need substantial upgrading to handle voice, then it is unlikely to be worth ditching your PBX if that is working well too. Even if the PBX is coming up for replacement, it may still be a close decision between upgrading your LAN and taking the path of least resistance by installing a new PBX.

In general though, enterprises are likely to migrate to VoIP as their existing PBXs reach...

21/3,K/18 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04701404 Supplier Number: 62986533 (USE FORMAT 7 FOR FULLTEXT)  
Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours.

M2 Presswire, pNA

June 27, 2000

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 755

... expect superior call quality and call volumes regardless of whether connections are made with traditional, PBX or IP telephones.whether the backbone is lightly or heavily congested.

The report stated: "During voice quality...

August 22, 2003

21/3,K/19 (Item 2 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04079505 Supplier Number: 53647939 (USE FORMAT 7 FOR FULLTEXT)  
**NEW WIRELESS COMMUNICATIONS FOR HOMEOWNERS & SMALL BUSINESSES.**

Telephone IP News, v10, n2, pNA

Feb, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 910

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...doing just that with the products we have developed. Small businesses, home offices, telecommuters and **busy** families will **discover** that our products will help them succeed or just make life simpler in the next...

...data jacks. The Controller is a digital voice switch and a router for all TCP/ **IP** data within the home and to / from the Internet. It also contains three expansion slots...

...The system will also be capable of providing users with voice, data and video over **Internet Protocol (IP)** technology. "Home networking represents one of the most potentially explosive new market opportunities in communications..."

...systems as a business grows. The system transforms a small business telephone system into a **PBX** with standard **PBX** features. Plus, the system is portable. When a company expands into new space, the system...

21/3,K/20 (Item 3 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

03400844 Supplier Number: 47003071 (USE FORMAT 7 FOR FULLTEXT)

**FACTS ON THE COST APPEAL OF INTERNET FAX**

Computer Finance, v7, n8, pN/A

Jan 1, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 3737

... the LAN), three RJ-11 analogue modem ports (for modems, a fax board or server, **PBX**, or the CO), a fax loop start port (to connect a fax machine if desired), one serial port (for configuration only), and a 425MB hard disk. The **IP/FaxRouter** converts fax data into standard TCP/ **IP** packets that behave exactly like any other type of data on the network. The disk is used to store a fax until TCP confirms the delivery of all the **packets**, thus reproducing the **confirmation** aspect of the native fax interface (even though the transmission is not necessarily real-time...)

21/3,K/21 (Item 1 from file: 647)  
DIALOG(R)File 647:cmp Computer Fulltext  
(c) 2003 CMP Media, LLC. All rts. reserv.

01022154 CMP ACCESSION NUMBER: WIN19940601S1885

Mobile Mail Keeps Remote Users in the Loop (E-Mail Software)

Hailey Lynne McKerry

WINDOWS MAGAZINE, 1994, n 506 , 076

PUBLICATION DATE: 940601

JOURNAL CODE: WIN LANGUAGE: English

August 22, 2003

RECORD TYPE: Fulltext  
SECTION HEADING: New Products

TEXT:

... size to access important messages without having to sort through all of them. The package includes icon-based location profiles, which can be altered with a single mouse click, to connect from often visited...

...as eight communications methods per location, from among such protocols as IPX/SPX (NetWare), TCP/ IP (UNIX) and X.25. cc:Mail Mobile also supports connections via ISDN, PBX, direct connection, RAM Mobile Data, cellular and landline modems. The package includes scripts for more...

21/3,K/22 (Item 1 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

25604827  
**Avaya's Growth in U.S. IP Telephony Market Outpacing Industry Average**  
CANADA NEWswire  
October 21, 2002  
JOURNAL CODE: WCNW LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 894

... VoIP Assessment tool is an essential tool in the IP Telephony evolution, enabling businesses to pinpoint potential voice traffic bottlenecks on IP Telephony networks before an implementation. Services such as these help minimize post-installation performance problems in the design stage. Another tool helping companies make the move to IP Telephony simpler is the Avaya(TM) Installation Wizard, which reduces complexity and time-to-install for the Enterprise Class IP Solutions (ECLIPS) portfolio. The Avaya Installation Wizard is a browser-based tool that is intuitive...

...including 90 percent of the Fortune 500(R). A world leader in secure and reliable Internet Protocol (IP) telephony systems, communications software applications and services, Avaya is driving the convergence of voice and...

21/3,K/23 (Item 2 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

12397165 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**ALCATEL: Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours**  
M2 PRESSWIRE  
June 27, 2000  
JOURNAL CODE: WMPR LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 686

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... expect superior call quality and call volumes regardless of whether connections are made with traditional, PBX or IP telephones.whether the backbone is lightly or heavily congested.

The report stated: "During voice quality..."

21/3,K/24 (Item 3 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

August 22, 2003

07727780 (USE FORMAT 7 OR 9 FOR FULLTEXT)

**Cabletron Systems and Cirilium Partner to Deliver Voice-Over-IP Solutions**

PR NEWSWIRE

October 13, 1999

JOURNAL CODE: WPRW LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 618

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... services. Interconnecting via SmartVoice router and switches, SVG utilises a single (UDP) protocol address to **identify IP packets** that contain voice traffic, allowing Cabletron's SSR's to prioritise voice traffic at wire...

21/3,K/25 (Item 1 from file: 696)

DIALOG(R)File 696:DIALOG Telecom. Newsletters

(c) 2003 The Dialog Corp. All rts. reserv.

00811672

**Niagara Bridge Commission Connected By DragonWave**

Wireless Data News

November 6, 2002 VOL: 10 ISSUE: 23 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH WORD COUNT: 843 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...The system operates in 18 GHz licensed bandwidth, supports voice as well as video over **Internet protocol** and guarantees 100 Mbps full-duplex service.

"This is meant as the large backbone pipe...paid \$175,000 for an installed network using DragonWave's technology to connect is seven **private branch exchanges**, O'Reilly adds. "This is now seven different locations tied together with these DragonWave radios...

...reason we went to DragonWave is because we're going to go to video over IP and we knew that the other wireless solution wasn't going to be able to take us to that level. In going to video over IP, which is going to take a large chunk of the pipe we've put in...

...we needed to be above the 11 [Mbps] bandwidth."

The commission will use video over IP primarily for its security capabilities. In the event of a bomb threat or of suspicious...

...we'll be able to take a look at the video and through imaging techniques **find** out when that **package** was left or some container was left" O'Reilly says. "Whether we'll be able...

21/3,K/26 (Item 2 from file: 696)

DIALOG(R)File 696:DIALOG Telecom. Newsletters

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00779432

**Bell Companies Could Hop On Board Of IBM/Cisco VoIP Deal**

Communications Today

October 30, 2001 VOL: 7 ISSUE: 203 DOCUMENT TYPE: NEWSLETTER

August 22, 2003

PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 249

RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...System's [CSCO] and IBM's [IBM] new packaged service that helps businesses roll out **IP** voice in a small or mid-size office, an analyst said.

Recently, Cisco and IBM agreed to offer a turnkey package, which includes Cisco **IP** telephones and **IP PBX** software bundled with an Intel-based

IBM server, to give customers a complete package to deploy a voice-over- **IP**

(VoIP) application.

The package is aimed at enterprise branch-office customers where the technology is...

...better positioned when demand in the telecom market returns. Olson said he thinks the turnkey **package** could **find** a niche in the current market.

"It is a very valuable pre-packaged solution and..."

21/3, K/27 (Item 3 from file: 696)

DIALOG(R) File 696:DIALOG Telecom. Newsletters  
(c) 2003 The Dialog Corp. All rts. reserv.

00666414

PRODUCTS

MULTIMEDIA WEEK

April 19, 1999 VOL: 8 ISSUE: 15 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH WORD COUNT: 901 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...automatically optimizing the network's handling of business-driven traffic.

AppSwitch monitors the network to **identify** **congestion** points and reveals the applications, users and behaviors that consume network resources; it also guarantees...

...board, price is \$75 per port, available Q3 1999. Analogic has doubled the voice over **IP** port density of its newest telephony application processor board to 60 channels per slot.

The...banks/concentrators; T-1/E-1 multiplexers; digital access and cross-connect systems; computer-to- **PBX** interfaces; and SONET/SDH multiplexers.

The CS61584A supports 3.3V as well as 5V operation...

...system chip-set compliant with ANSI2 and ITU-T3 standards for high- speed communications using **internet** **protocol** over existing telephone lines. Consisting of three devices, the chipset is expected to sample from...

21/3, K/28 (Item 4 from file: 696)

DIALOG(R) File 696:DIALOG Telecom. Newsletters  
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00665137

NEW PRODUCTS

BROADBAND NETWORKING NEWS

August 22, 2003

April 13, 1999 VOL: 9 ISSUE: 8 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 617 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...automatically optimizing the network's handling of business-driven traffic. AppSwitch monitors the network to **identify** **congestion** points and reveals the applications, users and behaviors that consume network resources; it also guarantees...

...price is US\$75 per port, available Q3 1999. Analogic has doubled the voice over **IP** port density of its newest telephony application processor board to 60 channels per slot. The...banks/concentrators; T-1/E-1 multiplexers; digital access and cross-connect systems; computer-to- **PBX** interfaces; and SONET/SDH multiplexers. The CS61584A supports 3.3V as well as 5V operation...

25/3,K/1 (Item 1 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

107516

**voip unwired**

Byline: phil hochmuth  
Journal: Network World Page Number: 39  
Publication Date: July 28, 2003  
Word Count: 1272 Line Count: 113

Text:

... solution would obviously be a wireless one: Burns used 802.11b gear to connect 50 **IP** phones, PCs, a router and satellite dish for the mining camp. The camp, which stretches...

... Wireless Ethernet certainly isn't the first infrastructure that experts recommend for carrying voice over **IP** (VoIP), but Burns and other users are finding 802.11 works fine for their **IP** telephony requirements. The combination of the technologies is proving useful for keeping mobile employees, such as hospital workers, in touch or for linking **IP** phones in areas where Category 5 cabling is hard to run. Voice quality can be...

...adoption of those technologies is still at least a year away. While some users say **IP** voice quality is fine over Wi-Fi, others have adopted proprietary QoS features supplied by Wi-Fi and wireless **IP** phone makers to make sure of that. At the mining camp, where voice and data...

... on router-based QoS. Burns built a wireless VoIP network using an AltiGen Communications AltiServ **IP PBX**, Polycom **IP** phones, Lucent Wi-Fi access points - lashed to trees, Cisco hubs and a router, which...

...equipment for outside communications. Hubs and Wi-Fi routers in the camp buildings connect the **IP** phones and connect to PCs for e-mail and mining data analysis. (More than a...

... huts, as Burns calls them. "There was no way we could have deployed a traditional **PBX** in this environment," he says. "It was pretty out there," Burns says of the network...

... in Los Angeles, nurses and doctors now stay in touch via 802.11b-based NetLink **IP** phones from SpectraLink. A total of 273 wireless **IP** handsets are in use at the hospital. Wireless **IP** phones are now a single source of communication for all staff, and replace a mix...

...such as laptops. Calling CallManager In the second project, the hospital installed a Cisco CallManager **IP PBX** to connect some remote facilities to a Nortel Meridian **PBX** over **IP**. USCUI brought those projects together when it chose to give the medical staff Wi-Fi...

...priority queues on the Eterasys LAN switches. CallManager - a redundant Windows server running Cisco's **IP PBX** software - routes all calls inside the USCUI. (The majority of the SpectraLink traffic is internal.) CallManager also provides **call - control** features, such as call forwarding, hold and dual-line support. While most VoIP calls are internal, SpectraLink phone users can place external calls, too. The VoIP traffic **converts** to regular **voice** as it moves from the CallManager to an ISDN line, connecting that **IP PBX** to the Nortel Meridian **PBX**. While adoption of wireless LANs isn't expected to outpace wired networks anytime soon, and...

25/3,K/2 (Item 2 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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107131

Stepping up to the IP telephony mgmt. table

IP telephony management tools

Byline: EDWIN MIER

Journal: Network World Page Number: 41

Publication Date: June 30, 2003

Word Count: 2968 Line Count: 282

Text:

A converged **IP PBX** system brings with it new and expanded management responsibilities for things such as voice quality, quality of service, bandwidth consumption, security, voice-over-IP parameter settings, IP call routing and softphone deployment. In this round of testing, we set out to determine how well **IP PBX** vendors are making those extra management tasks easier to bear. We tested products from four...

... areas - configuration, for example - the tools were adequate across the board (for details on the **IP PBX** configurations submitted and pricing go to [www.nwfusion.com](http://www.nwfusion.com), DocFinder: 6521). However, for real-time monitoring, generating user-settable alarms and traps, and long-term trend reporting of IP-telephony activity - clear winners and losers are emerging. All the leading **IP PBX** vendors were invited to participate in our test. Alcatel, Avaya, Siemens and Vertical Networks accepted...

...had agreed to be in the test but then declined saying new pieces of its IP-telephony management toolbox weren't ready for testing. Vendors could submit any of the management tools they offer to monitor or control an IP-telephony-only environment, and third-party packages that augmented their own products. Except for Vertical...

... Real-Time Monitoring, right). Other factors include: Phone configuration: Siemens embraces phone-side configuration of IP-telephony parameters. For example, setting the jitter-buffer size, a key parameter affecting VoIP voice quality, can be modified only on each individual IP phone; there is no centralized, systemwide jitter-buffer control in the Siemens environment. Vertical's approach, by comparison, is weighted more heavily with the system administrator. **IP PBX** management should be centralized when possible. Implementing settings on a per-phone basis breeds inefficiency...

... will experiment with their phone configuration. Also, centrally monitoring a whole network or subnet of IP phones yields a much better view of what's happening - in terms of bandwidth consumption...

... by querying individual phones. Reboot time: Another key issue is how long it takes an IP phone to reboot. Siemens was best at 20 seconds. At the other end of the scale, Vertical's IP phones didn't come back up for 2 minutes, 15 seconds. Almost all IP-phone configuration changes require a reboot. The difference between 20 seconds and two-plus minutes...

... Alcatel's interface for setting or changing VoIP QoS is especially cryptic. Events and alarms: **IP PBX** vendors have not done much in updating their event and alarm notifications to address IP-telephony concerns (see "Events, alarms, traps," page 43). For example, only Avaya lets users set...

... Trend reporting: The effectiveness of long-term and trend reporting depends heavily on whether the **IP PBX** includes useful IP-specific data elements in its call-detail records (CDR) (see "Trend, activity reports," page 43). Vertical provides the richest set of IP call details, followed closely by Alcatel. Avaya and Siemens provide very little useful, IP-specific call information in their call records. However, Avaya compensates for this with a new...

... use. Product particulars Alcatel's OmniPCX Enterprise: It don't come

August 22, 2003

easy Managing Alcatel's **IP PBX** in most cases requires OmniVista 4760, Alcatel's modular management software package. The server portion...

... we could not get OmniVista's online Help working properly. Another drawback is that softphone **call control** and management require a totally separate Windows-based server application, which is not even accessible...

... one or the other management applications. However, completing many of the tasks, such as resetting **IP** phones or gateways, involves the cryptic Telnet command-line interface. Alcatel says it plans to...

... Alcatel VoIP Assessment Tool, which comprises a Windows application and software that loads on Alcatel **IP** phones. From the Windows station the user directs any two Alcatel **IP** hard phones to conduct a user defined VoIP test with each other. The results are...

... measure and report full range of VoIP QoS parameters. 1 Issues special call records for **IP** calls, which provide much useful **IP** -telephony data. Shortcomings: 1 Soft phones require a separate **call - control** and management software structure. 1 Online Help was not available, and we couldn't get...

... tedious. Managing Avaya Communication Manager: A little help from my friends The cornerstone of Avaya **IP - PBX** management is the Windows-based, though command-line-like, interface called Avaya Site Administration (ASA...)

... LAN, a tool that lets you manipulate and import .WAV voice-response messages into the **IP PBX**. 1 VoIP Monitoring Manager (VMON), a tool that does a splendid job of monitoring VoIP activity by collecting and analyzing **real - time transport** control protocol reports. Avaya also threw in a third-party call-accounting package, called eCAS...

...on a par with Alcatel and Vertical. We ran a late-beta version of new **IP** hardphone code, which supported VoIP encryption. This turned out to be very easy to administer...

... the most part acceptable - effect on voice quality. The overall difficulty of managing the Avaya **IP PBX** is medium, based on the ASA interface. It will take a skilled user a month...

... and VoIP Monitoring Manager. We also employed Java-based Web-browser access to the system **call controller** and a third-party call-accounting package, eCAS, from Veremark. Price as tested: Integrated Management...

... Siemens' HiPath 3500: Take it to the limit HiPath Manager E is the Siemens' main **IP PBX** management software. This tool was augmented in our evaluation by the company's Manager I application that separately handles many of the **IP** -specific aspects of the system, and the Deployment Tool that discovers and status-checks **IP** hard phones. These are all clean, clear and consistent Windows applications, with excellent, context-sensitive online Help. Manager E connects directly to the HiPath 3500 **call controller** and obtains updated system data via a manual database download. We also tested Siemens' HiPath Fault Management tool, an SNMP-based application that collects all traps issued by the **IP PBX**. Siemens also submitted the Traffic Analyst tool with Impact CDR option, a third-party package...

... and Manager I interfaces, coupled with the ability to Web-browse directly into any Siemens **IP** hard phone and set or change various VoIP parameters. Of the systems tested, only Siemens supported this per- **IP** -phone Web-browser access. These tools work together pretty well on a live, **IP** -oriented HiPath 3500 system as far as configuration, but they are fairly limited from most other perspectives. Siemens brought in an **IP PBX** configuration with two **call controllers** - essentially two discrete systems - for our simulated two-site topology. Managing two

August 22, 2003

discrete systems was disjointed and duplicative. Everything you did on one - defining numbering plan, call routing, IP -phone user templates - had to be redone for the second system. Siemens offers a high...

...a starting price of \$7,400 for a 5000 RSM that handles up to 15 **call controllers**, it is not economically viable for only two systems, and Siemens didn't include it...

...the call detail records that the system sends it. However, there are not many useful IP -telephony-specific fields in the Siemens call-record format, so the reporting capabilities from an IP -telephony perspective are limited. The relative difficulty of managing this IP PBX is medium. Expect proficiency within about a month. Bottom line: Siemens Management tool kit: HiPath...

... Analyst with Impact CDR costs \$1,900. Strengths: 1 Administrator can Web-browse into any IP hard phone. 1 Best context-sensitive, on-screen Help of systems tested. 1 Some very good diagnostic capabilities. Shortcomings: 1 Call Detail Records lack useful IP -telephony details. 1 Fault Manager needs more SNMP NMS features. 1 Some key VoIP parameters...

... Model 3000: Take it easy Vertical's InstantOffice is at the low-end of the IP PBX capacity scale. The Model 3000 is offered in configurations as small as eight phones. In...

... s management fares as well as, and in a few respects even better than, the IP PBX big boys. InstantOffice has long supported IP trunking between remote systems, but only picked up IP hardphone station support in January. InstantOffice does not support a softphone, however. All the system...

... is a Web browser and Java-based interface installed directly into the Windows NT-based **call controller** that drives the system. Vertical also offers a high-end, umbrella management package for multi...

... three dozen icons that are arranged on the main screen in four groups: General Admin, PBX and Application Admin, Data Admin, and Trunk Admin. It is easier and faster to find...

... summarizing data in reports on a long-term basis. However, Vertical's CDRs contain many IP -telephony details, including such QoS metrics as jitter and packet loss. And exporting these CDR...

... files in a third-party application such as Microsoft Excel. Relative difficulty of managing this IP -PBX is low. Expect proficiency within about two weeks. Bottom line: Vertical Management tool kit: Remote...

... especially for WAN bandwidth optimization. 1 Very good, context-sensitive, on-screen Help. 1 Useful IP -telephony details contained in CDRs. 1 Excellent real-time monitoring and diagnostic capabilities. Shortcomings: 1 VLAN tagging not supported for VoIP QoS. 1 IP phones not reporting bandwidth statistics. 1 No softphone support. Mier is president of MierLabs, a network research and product test center in Hightstown, N.J., which focuses on IP telephony and its management. He can be reached at emier@mierlabs.com.

25/3,K/3 (Item 3 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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104177

Sip passes taste test  
The Session Initiation Protocol is winning converts among the voice-over-IP crowd.

Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 61  
Publication Date: December 02, 2002  
Word Count: 957 Line Count: 85

Text:

...operates at Layer 7 of the Open Systems Interconnection model stack, in conjunction with TCP/ IP and Real-Time Protocol ( RTP ), which are Layer 3 and Layer 4 protocols. TCP/ IP and RTP transmit packetized voice and video in sessions established with SIP. "We're interested in SIP as the key component to a base voice-over- IP architecture," says John Kristoff, research and design manager for the networks and telecom group at...

... SIP deployment with 15 SIP phones from Pingtel, along with Pingtel's Linux-based SIPxchange IP PBX . "VoIP and SIP are really separate, and one does not necessarily rely on the other..."

... for implementing VoIP." Kristoff says the simplicity of the protocol, along the lines of TCP/ IP , allows it to be deployed on networks without requiring lots of technical rejiggering of network...

... end or next year. For smaller deployments, Mitel and Pingtel offer SIP-based phones and IP PBX products. Last year, SIP got a shot in the arm when Microsoft threw its weight...

... business has two stores in the city, and recently installed Mitel's SIP-based 3050 IP PBX and 5505 IP SIP phones to support the locations. "What we had previously wasn't a system; it..."

... Mitel engineers to install the box. The 3050 is an all-in-one small-office PBX , and also includes a firewall, file-and-print server and router. The telephony part of...

...on them, so all the software for Internet connectivity is up and running when the IP PBXs were brought online. The SIP technology on the phones and the IP PBX from Mitel let Computer Korner staff make calls back and forth over the Internet as...

... uses SIP in conjunction with its Cisco-based VoIP system installed on campus with Cisco IP phones deployed to all faculty, staff and student dorm rooms. Deployed throughout the campus are 500 Cisco 7960 IP phones that can be enabled with SIP and other protocols. SIP coexists on Menlo's network along with the H.323 protocol and Cisco's Skinny Call Control Protocol, both of which run natively on Cisco CallManager IP PBXs. Menlo has installed an open source SIP server gateway, developed at Columbia University, which...

... phones to an H.323 address and allows SIP devices to register on the CallManager IP PBX . The SIP phones from Cisco have greatly eased the telecom management burden of the school...

... new address and location. For DePaul University's Kristoff, new applications such as using the IP phone as a thin client, or advanced unified messaging and video applications are the main...

25/3,K/4 (Item 1 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
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28484259

Zultys takes SIP to launch Zip  
IP telephony vendor unveils SIP-enabled handset in the US  
NEWSWIRE (VNU)

April 07, 2003

JOURNAL CODE: -WNEW LANGUAGE: English RECORD TYPE: FULLTEXT

August 22, 2003

WORD COUNT: 298

... appearances, or simultaneous incoming or outgoing calls. Other features include voice stream encryption through secure **Real - Time Transport** Protocol, power over Ethernet, five-way call-conferencing, and a full duplex speakerphone with acoustic..

August 22, 2003

27/3,K/1 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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01709574 03-60564

**Vox rocks**

Rohde, David  
Network World v15n39 PP: 75-76 Sep 28, 1998  
ISSN: 0887-7661 JRNL CODE: NWW  
WORD COUNT: 2273

...TEXT: calls to route over a highspeed data WAN via ATM, which to offer up via **IP** and which to send over the public switched telephone network. If **IP** trunking is one of the three options utilizing ARS and AAR, the **PBX** software takes an additional step. It pings to **determine** the **congestion** on the **IP** network for each call, according to Marissa Russotto, Lucent's offer manager for Definity ECS...**PBX** and voice messaging systems you paid a pile of money for, you'll probably **find** safe, new **packetized** voice options long before Wall Street discovers you're never going to send your CEO...

27/3,K/2 (Item 1 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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106431

**Cisco learning to roll with the punches**

Byline: PHIL HOCHMUTH AND JIM DUFFY  
Journal: Network World Page Number: 1  
Publication Date: May 19, 2003  
Word Count: 2233 Line Count: 198

Text:

... move into new markets as well as expand its presence in storage, security, wireless and **IP** telephony. But some observers say Cisco really needs to scramble to reinvent itself as the...

... in both areas - the company is looking for new markets to conquer, with voice over **IP** (VoIP), wireless, security and storage being on the short list. Chambers says each of these...

...over many customers. Cisco's AVVID products represented more than 50% of the market for **IP** phones and **PBX** revenue in the fourth quarter of 2002, according to Synergy Research. "I was a little..."

... it makes sense," because the industry is moving to converge data, voice and video to **IP**. Cisco's security and wireless products also have climbed to the top of their respective...

... Channel platform. While WLAN, VoIP and security all are intertwined in some way with core **IP** background, the storage market represents uncharted waters for the network giant. "Our interactions with Cisco have been around routers, switches and **IP** phones," says Jon Beyman, CIO of Lehman Brothers, the New York brokerage firm. "[But storage..."

... resale deals with EMC, Hitachi, HP and IBM to resell its MDS 9000 storage switch. **IP** commoditization Despite having its core markets wrapped up and strong momentum from its growth enterprise...off. SBC is purchasing Cisco's 12000 series Internet Routers for a nationwide OC-192 **IP** backbone network that is intended to transport services such as Dedicated Internet Access and SBC...

... DSL. Cisco is also now the preferred provider for specific SBC managed service products, including **IP** telephony, **IP** VPNs, security, storage

August 22, 2003

networking and WLANs. Sprint has upgraded its SprintLink IP network to support a Cisco technology called Layer 2 Tunneling Protocol Version 3. The technology...

... and operational costs, such as the development of operational support systems and provisioning scripts for IP / packet networks; and identifying profitable applications and services for these nets. Once these barriers are broken down, Cisco's...

27/3, K/3 (Item 2 from file: 674)  
DIALOG(R) File 674: Computer News Fulltext  
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103324

**Quality question remains for VoIP**

Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: October 07, 2002  
Word Count: 1322 Line Count: 115

Text:

Is the voice in voice over IP good enough to bet your business on? That's the make-or-break question for...

... would be a phone order from going awry because of poor sound quality over an IP link. Still, the potential cost savings are strong enough that Armstrong is willing to give...

... shot for certain applications. The company is planning to test an internal campus-to-campus IP telephony deployment before delving deeper into the technology. Quality measurement In a recent Network World...

...QoS) assurance on corporate networks. Almost half of those surveyed said that the quality of IP voice was a drawback. With voice quality being such a sticking point, the trick is...

...toll-quality VoIP. Some experts say there are hard tests and metrics for proving an IP telephony system, while others say the process is more art than science. Factors that might diminish the quality of an IP phone conversation rarely lie in the actual VoIP gear anymore, says Mike Hommer, manager of...

...Now that's down to about 10%," he says. "The quality issues - as far as IP voice equipment being able to efficiently encode and decode voice - have become less of a...

... packetized voice traffic, Hommer says. The result of latency is jitter, which can cause an IP voice conversation to break up. Most IP voice products have jitter buffering technology or other technology that smoothes out and reorders voice packets before turning them into audio, but sometimes excessive network latency cannot be overcome. **Packet analyzers** and port mirroring applications can be used to measure IP traffic volume and patterns to determine the sources of latency on a LAN or WAN...

... in testing tools from vendors such as Agilent, Empirix, Finisar and NetIQ for checking out IP voice equipment and network performance. Hommer says these tools are useful but don't always...

... people say," says Matthew Liste, practice manager for ThruPoint, a network consultancy that specializes in IP telephony technology. He recently completed an IP telephony project for Merrill Lynch where more than 1,000 Cisco IP phones were deployed at a site in New Jersey. He says enlisting the help of employees can be useful in determining whether an IP PBX system or LAN needs fine-tuning. "If you put [ IP ] phones out and ask people to occasionally write down the quality of their calls [on...

August 22, 2003

there," Liste says. The advantage in that is minimal disruption to employees, he adds. Another IP telephony consultant takes a more general approach. "You can buy a lot of expensive equipment..."

... year, members of The Seattle Times' communications and IT staffs said they initially experimented with IP phones on an existing infrastructure consisting of shared 10/100M bit/sec Bay Networks hubs...

... said Paul DeWees, a network systems analyst. At the Paulding School District in Georgia, Alcatel IP phone equipment was tested in a lab before phones and switches were deployed to 23...

... system running over LANs at the schools and connected by a fiber-optic, Gigabit Ethernet IP backbone. "To test the voice quality, we pretty much just played it by ear," says...

... the school district. "We did some live calls in a lab setup, with the new IP phones right next to the phones we had in place." Ragsdale says the calls sounded comparable between the circuit-switched and IP gear, and the deployment went fairly smoothly except at one school where some older LAN...

27/3,K/4 (Item 3 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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100803

**ADOMO BOLSTERS SPEECH-RECOGNITION PRODUCT**

Byline: ? BY ELLEN MESSMER  
Journal: Network World Page Number: 38  
Publication Date: May 06, 2002  
Word Count: 446 Line Count: 40

Text:

CUPERTINO, CALIF. - Adomo, whose speech-recognition package lets users check Microsoft Outlook e-mail via phone, is adding a way for business users to place...

... 000 for 50 to 100 users, is a server appliance that plugs into a corporate PBX and corporate LAN for access to a local Exchange server. Using a phone, a user...

... enterprise sales at Ericsson. Earlier, the two founded TouchWave, a start-up whose voice-over-IP gateway was sold to Ericsson, which markets it as the WebSwitch. Adomo has been easy...

27/3,K/5 (Item 4 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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099507

**VoIP advances**

**Avaya, 3Com, Mitel to unveil IP telephony gear.**  
Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: February 25, 2002  
Word Count: 1267 Line Count: 113

Text:

WASHINGTON, D.C. - Enterprise voice over IP will gain momentum this week at the VoiceCon show, where vendors from the old and new worlds of telecom will introduce products that could help IT professionals scale IP PBX systems to new heights and improve voice-over-IP network management.

August 22, 2003

Avaya will make a splash with seven new products in its Enterprise Class IP Systems (ECLIPS) line, launched in 2000 when the company spun off from Lucent. The most...

... the new wares are Linux-based Media Servers that can support up to 12,000 IP phones, 20 times the number on Avaya's previous top-line IP PBX, the IP 600. Avaya also will unveil a voice-over-IP gateway designed to keep phone lines up in the event of an IP WAN failure at remote offices; client/server software for turning 802.11b-based handhelds into IP phones; and an application for measuring IP voice bandwidth. 3Com and Mitel will also show new voice-over-IP wares that promise easier quality-of-service (QoS) deployment, and a multitude of new IP phones and conferencing stations for corporations. This bevy of IP voice gear comes as IT managers have become less skeptical of IP telephony's reliability and more aware of the potential cost savings and application benefits of...

... showed that 44% of U.S. businesses with more than 500 employees have started implementing IP telephone systems in some area of their corporations. The study, produced by market research firm Infotech, says these implementations are mostly in branch offices or new facilities rather than central PBX replacements. Infotech analyst Frank Stinson says the adoption of voice over IP will increase in the next few years as businesses that purchased new PBXs or PBX upgrades in 1999 - in preparation for Y2K - will look to replace those systems, with 87% of companies expected to implement some voice over IP by 2004 (see chart). "Telecom will definitely become more servercentric and IPcentric," as opposed to centralized, circuit-switched PBX systems, says Mark Katsouros, a communications automation specialist at the University of Maryland in College Park. IP telephony products from Avaya and Cisco are deployed in several areas on campus, Katsouros says, but the school's main system is still an Avaya Definity PBX. "It will be a while until everything becomes voice over IP," he adds. "We have a huge investment in traditional telephone equipment, and we have to integrate [voice over IP] slowly." In new buildings on campus where voice over IP will be deployed, Katsouros says the school anticipates saving thousands of dollars on wiring and...

... by deploying a single network for voice and data. "Anyone not considering deploying [voice over IP] is foolish because it will be here eventually," he says. Avaya gears up IP PBXs Avaya's new IP PBXs include the S8700 and S8300 Media Servers, Avaya's first Linux-based IP phone servers targeted at the enterprise core and remote offices, respectively. The S8700 will become Avaya's flagship IP PBX, with support for up to 12,000 users per server, an increase from 600 on...

... at a central site or branch office, but act as a single system - or "virtual PBX" - in terms of management, features and dial plan. The G700 also can be fitted with...

... analog modules for connecting to the public switched telephone network in the event of an IP WAN failure, with the S8300 blade providing full IP PBX functions and features. While Avaya says it will continue to market the IP600 and the Remote Office 300 IP PBXs, the company indicates that the new Media Servers will be the company's premier IP PBX platform going forward. Avaya says a key technical change in its ECLIPS products is the...

... makes the servers more stable and scalable than its previous Windows-based ECLIPS products. Competing IP PBXs such as Cisco's CallManager and Nortel's Business Communication Server use Windows-based operating systems that run the companies' IP call control software. One user of Cisco's CallManager says that he'd like to see more Linux in IP telephony equipment in general. "The reason [Cisco] goes with a Windows-based operating system on its [voice-over-IP product] is to be first to market," says Patrick Olson, CIO at Menlo College in Atherton,

August 22, 2003

Calif. Olson has used Cisco's voice-over- IP gear for several years with few complaints, but says he would like a more stable operating system, such as Linux, on his IP PBXs. The S8700 will start at around \$870 per user for a 1,000-user system. The G700 gateway and S8300 IP PBX blade will cost around \$1,000 per user. Both products will be targeted at branch-office users. Avaya has also adapted its Definity PBX call-processing software, renaming it MultiVantage and porting it to its new Linux-based platform...

... runs on the IP600 and Avaya's proprietary Unix system that runs on Avaya's PBX. On the client side, Avaya is introducing software that can be installed on any wireless...

...based handheld - with support for a microphone and headphones - allowing it to become an ECLIPS IP phone. The server software, which can run on the MultiVantage PBX or IP PBX platforms and registers the handheld with a phone extension, provides all call-control features to...

... from Avaya, which for the first time will let users see what percentage of their IP traffic is voice packets vs. other applications. This could be helpful for identifying network bottlenecks that could affect voice quality, the company says. \*Avaya's G600 media gateway, for connecting a central site ECLIPS IP PBX or Definity PBX to a WAN. \*Seven new IP endstation products from Mitel, which can be used to connect to an IP-enabled Mitel PBX over a network connection. New handsets include the 5010 and 5020 IP Phones for enterprise desktops and the lower-cost 5001 and 5005 IP Phones (which cost less than \$200) for high-volume phone deployments where minimal phone features are required. \*Mitel will also introduce its 5140 IP Appliance, which adds a screen for Web browsing to its IP phone. The company will also showcase its 5300 series IP conference devices, which could be used by a company with remote offices to conduct teleconferences...

... service fees. \*New QoS features on 3Com's SuperStack 4400 policy switches and its NBX IP PBX will allow the Layer 4 switch to autodetect an NBX on a network and configure...

... through a management application if more or less QoS configuration is required. \*3Com's SoundStation IP 3000 - 3Com NBX, an IP conferencing station based on SoundStation IP hardware from PolyCom, is also available for companies that want to conduct conference calls over...

27/3,K/6 (Item 5 from file: 674)  
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099457

How we did it

Journal: Network World Page Number: 46  
Publication Date: February 25, 2002  
Word Count: 412 Line Count: 37

Text:

... average of at least six ratings made by at least three experienced Miercom voice-over- IP lab testers. In rotation, testers conducted real-time, two-way conversations and special tests, over separate voice-over- IP connections, between two PCs running the soft phone under test, one installed on the Compaq...

... directions. All vendors participating in this test were required to provide and technically support the IP - PBX or server-based voice-over- IP equipment on which the soft phone operated during the tests. (See an online list of...

...on the back-end systems, so the media is already set up as voice-over-

August 22, 2003

IP traffic when it gets there. In assessing soft phones, we set up our test plans...  
... of those runs to represent the final score. We used an Agilent Internet Advisor protocol **analyzer** to capture **packets** to verify coder/decoders, analyze the boot process and complete calls between soft phones.

27/3,K/7 (Item 6 from file: 674)  
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098937

AVAYA TO MELD VPNS AND VOIP  
NEW GATEWAYS TO PRIORITIZE VOICE ON VPN LINKS.  
Byline: TIM GREENE  
Journal: Network World Page Number: 8  
Publication Date: January 28, 2002  
Word Count: 569 Line Count: 49

Text:

... A SPLASH THIS WEEK AT COMNET 2002 BY PUSHING VOICE CAPABILITIES INTO A SMALL-SITE **IP** VPN APPLIANCE, A MOVE THAT COULD HELP ENTERPRISE CUSTOMERS SAVE MONEY ON BRANCH-OFFICE TELEPHONE BILLS. BY **IDENTIFYING** VOICE **PACKETS** AND TAGGING THEM FOR TOP PRIORITY, THE NEW VSU-5 SETS THE STAGE FOR TYING...

... TELECOMMUTER OFFICES TO CORPORATE PBXS VIA SECURE VPN LINKS. THIS SUPPORT WOULD GIVE REMOTE OFFICES **PBX** PHONE FEATURES AND ACCESS TO THE PUBLIC TELEPHONE NETWORK OVER **PBX** TRUNKS TO A LOCAL PHONE CARRIER. REGULAR PHONE LINES TO REMOTE OFFICES COULD BE REDUCED...

... IT PRECONFIGURES VSU-5 AND A LARGER NEW VPN APPLIANCE CALLED VSU-10000 TO SUPPORT **IP** PHONES MADE BY AVAYA AND CISCO. THIS ENSURES THAT VPN GATEWAYS RECOGNIZE PRIORITIZATION TAGS THAT...

...OF VOICE AND DATA ON VPNS, USERS SHOULD BE AWARE THAT THE RELIABILITY OF AN **IP** VOICE NETWORK MIGHT NOT BE ON PAR WITH THAT OF TRADITIONAL PUBLIC PHONE NETWORKS. SO IF THEY USE THE VOICE-OVER- **IP** OPTION, THEY MIGHT WANT TO KEEP A REGULAR PHONE LINE TO USE IN CASE OF AN **IP** OUTAGE, KOSIUR SAYS. WITH 2M BIT/SEC OF TRIPLE-DES THROUGHPUT AND SUPPORT FOR FIVE...

... THE REMOTE ACCESS DEVICE, AND SUPPORTS PPP OVER ETHERNET. TO RUN VOICE OVER THE VPN, **IP** PHONES WOULD BE PLUGGED INTO BRANCH-OFFICE LANS AND WOULD CONNECT OVER A VPN LINK TO AN AVAYA DEFINITY **PBX** AT A HEADQUARTERS SITE. FROM THERE, CALLS COULD BE ROUTED TO OTHER PHONES ON THE...

27/3,K/8 (Item 7 from file: 674)  
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092365

THE HOWARD  
Industry luminary Howard Anderson picks the top network products and technologies of the past 15 years.  
Byline: HOWARD ANDERSON  
Journal: Network World Page Number: 79  
Publication Date: March 26, 2001  
Word Count: 1731 Line Count: 157

Text:

...upgrade their PBXs and let managers use the telephone as a nonreal-time device. The **PBX** never fulfilled its promise as an intercompany data-switching device, but it did start the...

August 22, 2003

... control system and a byproduct of network control was interesting new applications such as automatic **identification** of dialing.\* **Packet** switching. Behind LANs, behind ATM, routers, switches and the Internet, stands packet switching. More money... The first commercially viable carrier-class replacement for a Class 4 switch exploiting voice-over- IP technology. How the industry let Sonus sneak in and garner the market is going to...

...mail, e-mail and streaming media. The applications clogged the networks, so we had to **find** solutions, such as **packet** switching and protocols, which worked to increase availability and reduce cost which led to even

...

27/3,K/9 (Item 8 from file: 674)  
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092011

**Vendors pass VoIp interop hurdle**  
But **gateway-to-gateway** problems persist, and configuration remains difficult.

Byline: BETSY YOCOM, UWE BILGER, ROB SMITHERS AND MICHAEL HOMMER, NETWORK WORLD GLOBAL TEST ALLIANCE

Journal: Network World Page Number: 45

Publication Date: March 05, 2001

Word Count: 2505 Line Count: 239

Text:

In a groundbreaking public display of voice-over- IP interoperability, nine vendors tried to prove their convergence hardware and software could work together to...

... World and its Global Test Alliance partner Miercom last month, these vendors of voice-over- IP gateways and gatekeepers, IP phones, soft phones and IP PBXs demonstrated basic levels of interoperability. They successfully placed calls with each other at " toll..."

... have to choose one vendor or the other to provide all of your voice-over- IP infrastructure gatekeepers. Many of the 2,000-plus ComNet 2001 attendees who visited the interoperability lab entered skeptical, but left convinced that voice-over- IP vendors are achieving interoperability that might soon translate into multivendor converged networks in the real

...

...a bidirectional call based on the standards " slow start" procedure. The challengeMiercom's voice-over- IP research in the past two years has shown that while many vendors claim interoperability, few...

... behind closed doors. Late last year, Network World issued an editorial challenge to voice-over- IP vendors to go public. Miercom's initial call for products, based on H.323 Version...

...which provided the " reference" gatekeepers for the test bed, as well as other voice-over- IP equipment; HearMe, Memotec, Oki, Polypix, Quintum, Siemens and Sitara. Each sent equipment (see story, page...demand, but this creates incompatibilities that may require minor recoding in a multivendor voice-over- IP environment. This is what makes out-of-the-box interoperability based on H.323 so...

...complete fast start with the Clarent gatekeeper because its transmitting side did not have an IP address and Real-Time Protocol/Real-Time Control Protocol port numbers that the Clarent gatekeeper...

... be set up using the slow-start procedure. Engineers working on the problem completed several **packet** traces to **determine** the cause, but

August 22, 2003

left the prestige still unable to complete calls via slow start. Some...

... network. The bits are decoded back to PCM speech at the receiving end. Voice-over- IP gateways and IP phones support a certain amount of vocoders, but different vendors' support varying numbers and types...

... T's T.38 standard for fax transmissions. Based on our experiences testing voice-over- IP systems, this is a significant achievement. More than half of the voice-over- IP gateways we've tested recently have failed this faxing test. It's a challenge for voice-over- IP systems to recognize fax encoding and respond to it because they have trouble distinguishing between...

... among the participants and the ComNet attendees who visited the lab was that voice-over- IP interoperability based on H.323 has come a long way in the past six months...

... attempts, only six calls failed - a 99.9984% call-completion rate. Many single voice-over- IP gateways tested privately at Miercom's Labs haven't done as well. Siemens optiPoint 300 Advance IP phone was perhaps the most out-of-the-box-ready product, able to work with...is impaired. But to be fair, we didn't test the optiPoints against any similar IP phones in this round of testing, which may deliver similar performance delays. Despite many long hours of tracing packets and analyzing code, several vendors were unable to resolve lingering incompatibilities. For example, when operating in the...

... had no trouble communicating bidirectionally with Quintum's Tenor gateways and Siemens' optiPoint 300 Advance IP phones in the same network. Quintum's Tenor gateways also could not communicate with Memotec ...

... incompatibility in the Fast Connect procedure. Avaya also could not resolve incompatibilities between its IP600 ( IP PBX ) and the Quintum gateway, possibly due to routing problems. Nuera planned to demonstrate its new...

... the product was damaged in transit and could not be integrated into the voice over IP test bed. So where do we go from here? For starters, Cisco and Clarent acknowledge gatekeeper-to-gatekeeper incompatibility issues constitute the "next phase" in voice-over- IP interoperability testing. We expect to see the leading vendors in this area - Cisco, Clarent and...

...lead to more widespread dissemination of documentation that will outline specific incompatibilities among voice-over- IP equipment - and the means to solve them. More agreement in the standards bodies as to...

27/3,K/10 (Item 9 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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088565

VoIP to carry 'bandwidth tax'

Byline: PHIL HOCHMUTH

Journal: Network World Page Number: 1

Publication Date: October 30, 2000

Word Count: 1113 Line Count: 100

Text:

Voice over IP 's dirty little secret is that it can be a bandwidth hog. Observers warn that customers looking to use voice over IP had better plan to significantly bolster bandwidth and look hard at voice compression technology before making a commitment. While money can be saved with voice over IP by skirting intracompany long-distance charges and consolidating voice and data WAN circuits, users should...

August 22, 2003

...much as two-thirds of a T-1 line's bandwidth can be consumed by **IP** overhead - headers and error correction bits - depending on the type of voice-over- **IP** codec used. Standard speech-encoding algorithms, or codecs, are defined by the International Telecommunication Union...

... little 16K bit/sec and 8K bit/sec. Most corporate- and carrier-class voice-over- **IP** equipment, including gateways, **IP** phones, **IP** PBXs and videoconferencing equipment from vendors such as Cisco, Nortel Networks and Lucent, employ these...

... transmit packetized voice signals over data networks. When choosing a codec for your voice-over- **IP** network, it is important to consider how your compression method will affect the ratio of **IP** packet overhead data to actual voice frames per packet, says Scott Hamilton, **IP** telephony track manager for Tolly Research in Manasquan, N.J. Tolly Research recently measured the...

...voice T-1 circuit). That means 46K bit/sec of a T-1 is consuming **IP** overhead. "Users should not assume that allocating a T-1 equivalent for G.711 voice over **IP** on their data network will be sufficient," Hamilton says. "It's going to be close..."

... Research found that compressed G.728 and G.729a traffic was also bogged down by **IP** packet overhead. In all three codec tests, the group found that up to 80% of the bytes in the voice packets consisted of **IP** packet overhead. "If someone picks G.728 and thinks they're going to get four...

... to banks, is rolling out a Cisco Architecture for Voice Video and Integrated Data (AVVID) **IP** telephony system. Ahmad Sidani, a senior network engineer for the firm, says that in addition...

... standard he will use. "Once we identify exactly what the pattern of the voice-over- **IP** application is going to have, we can then go and identify which codec's compression..."

...want," Sidani says. T-1 lines will be used to connect AVVID call servers and **IP** phones in the branch offices to a **PBX** in its Santa Ana, Calif., headquarters, Sidani says. Although he would like to use G...

...and voice needs are going to be different in each office. "Remembering to factor in **IP** packet overhead when voice is packetized is something that can be overlooked by some users, says Brian Dal Bello, manager for Nortel's Succession enterprise voice-over- **IP** product line. If miscalculated, this can sometimes erase any planned cost savings of a voice-over- **IP** rollout, he adds. "When voice over **IP** goes into an enterprise, people have to understand all the variables that can affect their..."

... rate and calculate if they're actually saving bandwidth or money by using voice over **IP**," instead of traditional voice, he says. From the deployments Dal Bello has seen with customers...

... 711 in LANs where bandwidth is plentiful and G.729 for WANs. Other voice-over- **IP** equipment vendors are working to unload the inherent baggage that accompanies voice-over- **IP** packets. "If you can aggregate packets and put a common address in front of them, you can reduce the overhead associated with sending voice over an **IP** network," says Heidi Bersin, marketing vice president for Clarent, a maker of carrier and enterprise voice-over- **IP** gateways. "It's sort of like the multiplexing of packets." Clarent uses proprietary technology it calls ThruPacket, which sends voice-over- **IP** packets along as links in a chain instead of each packet having its own addressing is inserted into each packet in a ThruPacket chain, which **identifies** the **packet** as a chain "link." Only the lead packet in the chain contains the **IP** packet overhead data including Ethernet and **IP** addresses that can cause congestion and latency in normal voice-over- **IP** networks. ThruPacket is present in the

August 22, 2003

company's carrier-class Gateway 400 and 1200 and...

... 100 for firms. Some network professionals would prefer to avoid the problems with voice over IP and use other technologies for converging voice and data, such as ATM. "I still say..."

... Sphericall equipment in eight remote offices via T-1 lines. Hays is looking into an IP version of the Sphericall product, but is not rushing to replace ATM with IP for his long-distance telephone trunks. "You can get a lot of latency on your voice network just because of the IP characteristics," he says. "I don't know if there is a good way you can..."

27/3,K/11 (Item 10 from file: 674)

DIALOG(R)File 674:Computer News Fulltext

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086478

**Megaco to bridge PSTN, IPnetworks**

Byline: JAMES RAFFERTY

Journal: Network World Page Number: 49

Publication Date: August 14, 2000

Word Count: 646 Line Count: 57

Text:

... fax and multimedia calls to be switched between the public switched telephone network and emerging IP networks. Megaco stands for Media Gateway Control. A joint activity of the International Telecommunication Union...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via IP from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber-related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a PBX in a company. In this case, a call is placed by the fax device and routed to the local central office by the PBX. The central office then sends an SS7 message to a signaling gateway in order to ...

... used to provide an end-to-end connection via the long-distance service provider's IP network to the end destination. At this point, the MGC is aware of both a...

... is set up with two terminations, a switched termination on one side and a packetized IP termination on the other. To provide the flexibility to check for calls other than voice...

... gateways into fax-compatible modes, and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed, delivering a document across the hybrid network. The Megaco call **discrimination package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

... applications of phone service over hybrid phone networks that will contain a mix of switched, IP and ATM technology. Rafferty is senior product manager for IP telephony at Brooktrout Technology. He can be reached at [jraff@brooktrout.com](mailto:jraff@brooktrout.com).

27/3,K/12 (Item 11 from file: 674)

DIALOG(R)File 674:Computer News Fulltext

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August 22, 2003

086477

**Megaco will bring circuit and packet networks together**  
Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 684 Line Count: 60

Text:

... as voice, fax and multimedia calls to be switched between the traditional network and emerging IP networks is called. Megaco stands for Media Gateway Control. A joint activity of the International...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via IP from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office then sends an SS7 message to a signaling gateway, in order to...

... used to provide an end-to-end connection via the long-distance service provider's IP network to the end destination. At this point, the MGC is aware of both a...

... is set up with two "terminations," a switched termination on one side and a packetized IP termination on the other. To provide the flexibility to check for calls other than voice, the MGC may set up the media gateways to do "call discrimination," using a call **discrimination package**. This enables a MGC to gather information needed to identify the media type for a

...

... swiftly take action, place both media gateways into fax compatible modes (using the fax and IP fax packages), and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

... of phone service over a hybrid phone networks that will contain a mix of switched, IP and ATM technology. Rafferty is senior product manager for IP telephony at Brooktrout Technology. He can be reached at ...TK

27/3, K/13 (Item 12 from file: 674)

DIALOG(R)File 674:Computer News Fulltext  
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086457

**Megaco protocol to bring circuit ...**  
Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 850 Line Count: 74

Text:

... as voice, fax and multimedia calls to be switched between the traditional network and emerging IP networks is called Megaco/H.248. Megaco stands for Media Gateway Control. A joint activity...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via IP from existing Signaling System 7

August 22, 2003

(SS7)-enabled networks and their databases of subscriber related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office in the local loop then sends an SS7 message to a signaling...

... used to provide an end-to-end connection via the long-distance service provider's **IP** network to the end destination. At this point, the MGC is aware of both a...

... is set up with two "terminations," a switched termination on one side and a packetized **IP** termination on the other. In order to provide the flexibility to check for calls other...

... media gateways so that they will do "call discrimination." This is accomplished using a call **discrimination package**. This enables a MGC to gather information needed to identify the media type for a...

... swiftly take action, place both media gateways into fax compatible modes (using the fax and **IP** fax packages), and a normal fax session can take place. From this point, the call **discrimination package** will be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls which are in common...

... of phone service over a hybrid phone network that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for **IP** telephony at Brooktrout Technology. He can be reached at ...TK

27/3,K/14 (Item 13 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
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075423

Moving toward convergence

AltiGen's PC-based PBX bets your phone system on NT.

Byline: Douglas Spindler

Journal: Network World Page Number: 73

Publication Date: June 21, 1999

Word Count: 740 Line Count: 68

Text:

... Communications' AltiServ, a Windows NT-based telephone and voice mail system. AltiServ is a combination **PBX**, voice mail and messaging system housed in a single NT server. With the addition of AltiWare **IP**, telephone calls can be routed over an **IP** network to another AltiServ server. While AltiServ Open Edition (OE) 2.1 has been on...

...market since late last year, we now think it warrants closer examination because it blends **PBX**, PC and messaging technologies into one system, and it costs anywhere from 30% to 75...

...is limited to 144 users per server because the system uses ISA slots for the **PBX** /voice mail functionality and PCI slots for voice over **IP**. We first tested AltiServ with voice traffic only. Our users reported the system was easy to use, and their voices were clear and easily **recognizable**. Next, using a **packet** generator we placed a moderate network load across our pseudo-WAN link. Conversation quality degraded...

... so we configured the routers to use Priority Queuing (packet

August 22, 2003

prioritization) for the voice-over- IP packets. Sure enough, voice quality returned to its previous level. In the version of AltiWare IP we tested, the bandwidth requirements for voice over IP were surprisingly large compared to competitors' voice-over- IP products. AltiWare IP requires 96K bytes per channel whereas other voice-over- IP products that support compression require only 10K to 20K bytes per channel. AltiGen is expected to release a new version of AltiWare IP this fall that will support compression. Because users are accustomed to 24-7 telephone uptime...

27/3,K/15 (Item 1 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

3488267 Supplier Number: 03488267 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
VDI--pulling together: integrating voice and data over a single network has been vaunted as the way ahead for years--but how many UK corporates have yet to make the leap of faith required even to push their internal voice traffic over their own LAN? Philip Hunter looks at both sides of the VDI story to see if at last they are pulling together. (Telecoms) (Cover Story)

(Voice-data integration)

Communicate, p 19(3)

June 2002

DOCUMENT TYPE: Journal; Cover Story; Industry Overview ISSN: 1352-0040 (United Kingdom)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 2719

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...purely at Layer 2 and are therefore incapable of acting on Layer 3 information within IP packet headers. This means they cannot **identify** voice **packets**, and so cannot give them the priority they need to ensure they are delivered within...

...is no longer an issue with recently installed Layer 3 switches, which are capable of **identifying** and prioritising IP **packets**. But to muddy the waters further, some sites have a mixture of Layer 3 switches...

...that return on investment (ROI) calculations will depend heavily not just on where the existing **PBX** lies on its lifecycle curve, but also on the capabilities of the LAN switching equipment...

...need substantial upgrading to handle voice, then it is unlikely to be worth ditching your **PBX** if that is working well too. Even if the **PBX** is coming up for replacement, it may still be a close decision between upgrading your LAN and taking the path of least resistance by installing a new **PBX**.

In general though, enterprises are likely to migrate to VoIP as their existing PBXs reach...

27/3,K/16 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04701404 Supplier Number: 62986533 (USE FORMAT 7 FOR FULLTEXT)  
Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours.  
M2 Presswire, pNA  
June 27, 2000  
Language: English Record Type: Fulltext

August 22, 2003

Document Type: Magazine/Journal; Trade  
Word Count: 755

... expect superior call quality and call volumes regardless of whether connections are made with traditional, **PBX** or **IP** telephones.whether the backbone is lightly or heavily congested.

The report stated: "During voice quality...

27/3,K/17 (Item 2 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04079505 Supplier Number: 53647939 (USE FORMAT 7 FOR FULLTEXT)  
**NEW WIRELESS COMMUNICATIONS FOR HOMEOWNERS & SMALL BUSINESSES.**

Telephone IP News, v10, n2, pNA

Feb, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 910

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...doing just that with the products we have developed. Small businesses, home offices, telecommuters and **busy** families will **discover** that our products will help them succeed or just make life simpler in the next...

...data jacks. The Controller is a digital voice switch and a router for all TCP/ **IP** data within the home and to / from the Internet. It also contains three expansion slots...

...The system will also be capable of providing users with voice, data and video over **Internet Protocol (IP)** technology. "Home networking represents one of the most potentially explosive new market opportunities in communications..."

...systems as a business grows. The system transforms a small business telephone system into a **PBX** with standard **PBX** features. Plus, the system is portable. When a company expands into new space, the system...

27/3,K/18 (Item 3 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

03400844 Supplier Number: 47003071 (USE FORMAT 7 FOR FULLTEXT)

**FACTS ON THE COST APPEAL OF INTERNET FAX**

Computer Finance, v7, n8, pN/A

Jan 1, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 3737

... the LAN), three RJ-11 analogue modem ports (for modems, a fax board or server, **PBX**, or the CO), a fax loop start port (to connect a fax machine if desired), one serial port (for configuration only), and a 425MB hard disk. The **IP** /FaxRouter converts fax data into standard TCP/ **IP** packets that behave exactly like any other type of data on the network. The disk is used to store a fax until TCP confirms the delivery of all the packets, thus reproducing the **confirmation** aspect of the native fax interface (even though the transmission is not necessarily real-time...)

27/3,K/19 (Item 1 from file: 647)  
DIALOG(R)File 647:CMF Computer Fulltext

August 22, 2003

(c) 2003 CMP Media, LLC. All rts. reserv.

01022154 CMP ACCESSION NUMBER: WIN19940601S1885  
**Mobile Mail Keeps Remote Users in the Loop** (E-Mail Software)  
Hailey Lynne McKerry  
WINDOWS MAGAZINE, 1994, n 506 , 076  
PUBLICATION DATE: 940601  
JOURNAL CODE: WIN LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: New Products

TEXT:

... size to access important messages without having to sort through all of them. The package includes icon-based location profiles, which can be altered with a single mouse click, to connect from often visited...

...as eight communications methods per location, from among such protocols as IPX/SPX (NetWare), TCP/ IP (UNIX) and X.25. cc:Mail Mobile also supports connections via ISDN, PBX, direct connection, RAM Mobile Data, cellular and landline modems. The package includes scripts for more...

27/3,K/20 (Item 1 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

25604827  
**Avaya's Growth in U.S. IP Telephony Market Outpacing Industry Average**  
CANADA NEWswire  
October 21, 2002  
JOURNAL CODE: WCNW LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 894

... VoIP Assessment tool is an essential tool in the IP Telephony evolution, enabling businesses to pinpoint potential voice traffic bottlenecks on IP Telephony networks before an implementation. Services such as these help minimize post-installation performance problems in the design stage. Another tool helping companies make the move to IP Telephony simpler is the Avaya(TM) Installation Wizard, which reduces complexity and time-to-install for the Enterprise Class IP Solutions (ECLIPS) portfolio. The Avaya Installation Wizard is a browser-based tool that is intuitive...

...including 90 percent of the Fortune 500(R). A world leader in secure and reliable Internet Protocol (IP) telephony systems, communications software applications and services, Avaya is driving the convergence of voice and...

27/3,K/21 (Item 2 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

12397165 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**ALCATEL: Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours**  
M2 PRESSWIRE  
June 27, 2000 .  
JOURNAL CODE: WMPR LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 686

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... expect superior call quality and call volumes regardless of whether connections are made with traditional, PBX or IP telephones.whether the

August 22, 2003

backbone is lightly or heavily congested.  
The report stated: "During voice quality...

27/3,K/22 (Item 3 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

07727780 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Cabletron Systems and Cirilium Partner to Deliver Voice-Over-IP Solutions**  
PR NEWSWIRE  
October 13, 1999  
JOURNAL CODE: WPRW LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 618

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... services. Interconnecting via SmartVoice router and switches, SVG utilises a single (UDP) protocol address to **identify IP packets** that contain voice traffic, allowing Cabletron's SSR's to prioritise voice traffic at wire...

27/3,K/23 (Item 1 from file: 696)  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
(c) 2003 The Dialog Corp. All rts. reserv.

00811672  
**Niagara Bridge Commission Connected By DragonWave**  
Wireless Data News  
November 6, 2002 VOL: 10 ISSUE: 23 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 843 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...The system operates in 18 GHz licensed bandwidth, supports voice as well as video over **Internet protocol** and guarantees 100 Mbps full-duplex service.  
"This is meant as the large backbone pipe...paid \$175,000 for an installed network using DragonWave's technology to connect is seven **private branch exchanges** , O'Reilly adds. "This is now seven different locations tied together with these DragonWave radios...

...reason we went to DragonWave is because we're going to go to video over **IP** and we knew that the other wireless solution wasn't going to be able to take us to that level. In going to video over **IP** , which is going to take a large chunk of the pipe we've put in...

...we needed to be above the 11 [Mbps] bandwidth." The commission will use video over **IP** primarily for its security capabilities. In the event of a bomb threat or of suspicious...

...we'll be able to take a look at the video and through imaging techniques **find** out when that **package** was left or some container was left". O'Reilly says. "Whether we'll be able...

August 22, 2003

27/3,K/24 (Item 2 from file: 696)  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
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00779432

**Bell Companies Could Hop On Board Of IBM/Cisco VoIP Deal**  
Communications Today  
October 30, 2001 VOL: 7 ISSUE: 203 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 249 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...System's [CSCO] and IBM's [IBM] new packaged service that helps businesses roll out IP voice in a small or mid-size office, an analyst said.

Recently, Cisco and IBM agreed to offer a turnkey package, which includes Cisco IP telephones and IP PBX software bundled with an Intel-based

IBM server, to give customers a complete package to deploy a voice-over- IP

(VoIP) application.

The package is aimed at enterprise branch-office customers where the technology is...

...better positioned when demand in the telecom market returns. Olson said he thinks the turnkey package could find a niche in the current market.

"It is a very valuable pre-packaged solution and...

27/3,K/25 (Item 3 from file: 696)  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
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00666414

**PRODUCTS**  
MULTIMEDIA WEEK  
April 19, 1999 VOL: 8 ISSUE: 15 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 901 RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...automatically optimizing the network's handling of business-driven traffic.

AppSwitch monitors the network to identify congestion points and reveals the applications, users and behaviors that consume network resources; it also guarantees...

...board, price is \$75 per port, available Q3 1999. Analogic has doubled the voice over IP port density of its newest telephony application processor board to 60 channels per slot.

The...banks/concentrators; T-1/E-1 multiplexers; digital access and cross-connect systems; computer-to- PBX interfaces; and SONET/SDH multiplexers.

The CS61584A supports 3.3V as well as 5V operation...

...system chip-set compliant with ANSI2 and ITU-T3 standards for high- speed communications using internet protocol over existing telephone lines. Consisting of three devices, the chipset is expected to sample from...

August 22, 2003

28/3,K/1 (Item 1 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

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01709574 03-60564

**Vox rocks**

Rohde, David

Network World v15n39 PP: 75-76 Sep 28, 1998

ISSN: 0887-7661 JRNL CODE: NWW

WORD COUNT: 2273

...TEXT: calls to route over a highspeed data WAN via ATM, which to offer up via IP and which to send over the public switched telephone network. If IP trunking is one of the three options utilizing ARS and AAR, the PBX software takes an additional step. It pings to determine the congestion on the IP network for each call, according to Marissa Russotto, Lucent's offer manager for Definity ECS...PBX and voice messaging systems you paid a pile of money for, you'll probably find safe, new packetized voice options long before Wall Street discovers you're never going to send your CEO...

28/3,K/2 (Item 1 from file: 674)

DIALOG(R)File 674:Computer News Fulltext

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106431

**Cisco learning to roll with the punches**

Byline: PHIL HOCHMUTH AND JIM DUFFY

Journal: Network World Page Number: 1

Publication Date: May 19, 2003

Word Count: 2233 Line Count: 198

Text:

... move into new markets as well as expand its presence in storage, security, wireless and IP telephony. But some observers say Cisco really needs to scramble to reinvent itself as the...

... in both areas - the company is looking for new markets to conquer, with voice over IP (VoIP), wireless, security and storage being on the short list. Chambers says each of these...

...over many customers. Cisco's AVVID products represented more than 50% of the market for IP phones and PBX revenue in the fourth quarter of 2002, according to Synergy Research. "I was a little..."

... it makes sense," because the industry is moving to converge data, voice and video to IP. Cisco's security and wireless products also have climbed to the top of their respective...

... Channel platform. While WLAN, VoIP and security all are intertwined in some way with core IP background, the storage market represents uncharted waters for the network giant. "Our interactions with Cisco have been around routers, switches and IP phones," says Jon Beyman, CIO of Lehman Brothers, the New York brokerage firm. "[But storage..."

... resale deals with EMC, Hitachi, HP and IBM to resell its MDS 9000 storage switch. IP commoditization Despite having its core markets wrapped up and strong momentum from its growth enterprise...off. SBC is purchasing Cisco's 12000 series Internet Router's for a nationwide OC-192 IP backbone network that is intended to transport services such as Dedicated Internet Access and SBC...

... DSL. Cisco is also now the preferred provider for specific SBC managed service products, including IP telephony, IP VPNs, security, storage

August 22, 2003

networking and WLANs. Sprint has upgraded its SprintLink IP network to support a Cisco technology called Layer 2 Tunneling Protocol Version 3. The technology...

... and operational costs, such as the development of operational support systems and provisioning scripts for IP / packet networks; and identifying profitable applications and services for these nets. Once these barriers are broken down, Cisco's...

28/3, K/3 (Item 2 from file: 674)  
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103324

**Quality question remains for VoIP**

Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: October 07, 2002  
Word Count: 1322 Line Count: 115

Text:

Is the voice in voice over IP good enough to bet your business on? That's the make-or-break question for...

... would be a phone order from going awry because of poor sound quality over an IP link. Still, the potential cost savings are strong enough that Armstrong is willing to give...

... shot for certain applications. The company is planning to test an internal campus-to-campus IP telephony deployment before delving deeper into the technology. Quality measurement In a recent Network World...

...QoS) assurance on corporate networks. Almost half of those surveyed said that the quality of IP voice was a drawback. With voice quality being such a sticking point, the trick is...

...toll-quality VoIP. Some experts say there are hard tests and metrics for proving an IP telephony system, while others say the process is more art than science. Factors that might diminish the quality of an IP phone conversation rarely lie in the actual VoIP gear anymore, says Mike Hommer, manager of...

...Now that's down to about 10%," he says. "The quality issues - as far as IP voice equipment being able to efficiently encode and decode voice - have become less of a...

... packetized voice traffic, Hommer says. The result of latency is jitter, which can cause an IP voice conversation to break up. Most IP voice products have jitter buffering technology or other technology that smoothes out and reorders voice packets before turning them into audio, but sometimes excessive network latency cannot be overcome. **Packet analyzers** and port mirroring applications can be used to measure IP traffic volume and patterns to determine the sources of latency on a LAN or WAN...

... in testing tools from vendors such as Agilent, Empirix, Finisar and NetIQ for checking out IP voice equipment and network performance. Hommer says these tools are useful but don't always...

... people say," says Matthew Liste, practice manager for ThruPoint, a network consultancy that specializes in IP telephony technology. He recently completed an IP telephony project for Merrill Lynch where more than 1,000 Cisco IP phones were deployed at a site in New Jersey. He says enlisting the help of employees can be useful in determining whether an IP PBX system or LAN needs fine-tuning. "If you put [ IP ] phones out and ask people to occasionally write down the quality of their calls [on...

August 22, 2003

there," Liste says. The advantage in that is minimal disruption to employees, he adds. Another IP telephony consultant takes a more general approach. "You can buy a lot of expensive equipment..."

... year, members of The Seattle Times' communications and IT staffs said they initially experimented with IP phones on an existing infrastructure consisting of shared 10/100M bit/sec Bay Networks hubs...

... said Paul DeWees, a network systems analyst. At the Paulding School District in Georgia, Alcatel IP phone equipment was tested in a lab before phones and switches were deployed to 23...

... system running over LANs at the schools and connected by a fiber-optic, Gigabit Ethernet IP backbone. "To test the voice quality, we pretty much just played it by ear," says...

... the school district. "We did some live calls in a lab setup, with the new IP phones right next to the phones we had in place." Ragsdale says the calls sounded comparable between the circuit-switched and IP gear, and the deployment went fairly smoothly except at one school where some older LAN...

**28/3,K/4 (Item 3 from file: 674)**  
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100803

**ADOMO BOLSTERS SPEECH-RECOGNITION PRODUCT**  
Byline: ? BY ELLEN MESSMER  
Journal: Network World Page Number: 38  
Publication Date: May 06, 2002  
Word Count: 446 Line Count: 40

Text:

CUPERTINO, CALIF. - Adomo, whose speech- recognition package lets users check Microsoft Outlook e-mail via phone, is adding a way for business users to place...

... 000 for 50 to 100 users, is a server appliance that plugs into a corporate PBX and corporate LAN for access to a local Exchange server. Using a phone, a user...

... enterprise sales at Ericsson. Earlier, the two founded TouchWave, a start-up whose voice-over- IP gateway was sold to Ericsson, which markets it as the WebSwitch. Adomo has been easy...

**28/3,K/5 (Item 4 from file: 674)**  
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099507

**VoIP advances**  
**Avaya, 3Com, Mitel to unveil IP telephony gear.**  
Byline: PHIL HOCHMUTH  
Journal: Network World Page Number: 1  
Publication Date: February 25, 2002  
Word Count: 1267 Line Count: 113

Text:

WASHINGTON, D.C. - Enterprise voice over IP will gain momentum this week at the VoiceCon show, where vendors from the old and new worlds of telecom will introduce products that could help IT professionals scale IP PBX systems to new heights and improve voice-over- IP network management.

August 22, 2003

Avaya will make a splash with seven new products in its Enterprise Class IP Systems (ECLIPS) line, launched in 2000 when the company spun off from Lucent. The most...

... the new wares are Linux-based Media Servers that can support up to 12,000 IP phones, 20 times the number on Avaya's previous top-line IP PBX, the IP 600. Avaya also will unveil a voice-over-IP gateway designed to keep phone lines up in the event of an IP WAN failure at remote offices; client/server software for turning 802.11b-based handhelds into IP phones; and an application for measuring IP voice bandwidth. 3Com and Mitel will also show new voice-over-IP wares that promise easier quality-of-service (QoS) deployment, and a multitude of new IP phones and conferencing stations for corporations. This bevy of IP voice gear comes as IT managers have become less skeptical of IP telephony's reliability and more aware of the potential cost savings and application benefits of...

... showed that 44% of U.S. businesses with more than 500 employees have started implementing IP telephone systems in some area of their corporations. The study, produced by market research firm Infotech, says these implementations are mostly in branch offices or new facilities rather than central PBX replacements. Infotech analyst Frank Stinson says the adoption of voice over IP will increase in the next few years as businesses that purchased new PBXs or PBX upgrades in 1999 - in preparation for Y2K - will look to replace those systems, with 87% of companies expected to implement some voice over IP by 2004 (see chart). "Telecom will definitely become more servercentric and IPcentric," as opposed to centralized, circuit-switched PBX systems, says Mark Katsouros, a communications automation specialist at the University of Maryland in College Park. IP telephony products from Avaya and Cisco are deployed in several areas on campus, Katsouros says, but the school's main system is still an Avaya Definity PBX. "It will be a while until everything becomes voice over IP," he adds. "We have a huge investment in traditional telephone equipment, and we have to integrate [voice over IP] slowly." In new buildings on campus where voice over IP will be deployed, Katsouros says the school anticipates saving thousands of dollars on wiring and...

... by deploying a single network for voice and data. "Anyone not considering deploying [voice over IP] is foolish because it will be here eventually," he says. Avaya gears up IP PBXs Avaya's new IP PBXs include the S8700 and S8300 Media Servers, Avaya's first Linux-based IP phone servers targeted at the enterprise core and remote offices, respectively. The S8700 will become Avaya's flagship IP PBX, with support for up to 12,000 users per server, an increase from 600 on...

... at a central site or branch office, but act as a single system - or "virtual PBX" - in terms of management, features and dial plan. The G700 also can be fitted with...

... analog modules for connecting to the public switched telephone network in the event of an IP WAN failure, with the S8300 blade providing full IP PBX functions and features. While Avaya says it will continue to market the IP600 and the Remote Office 300 IP PBXs, the company indicates that the new Media Servers will be the company's premier IP PBX platform going forward. Avaya says a key technical change in its ECLIPS products is the...

... makes the servers more stable and scalable than its previous Windows-based ECLIPS products. Competing IP PBXs such as Cisco's CallManager and Nortel's Business Communication Server use Windows-based operating systems that run the companies' IP call control software. One user of Cisco's CallManager says that he'd like to see more Linux in IP telephony equipment in general. "The reason [Cisco] goes with a Windows-based operating system on its [voice-over-IP product] is to be first to market," says Patrick Olson, CIO at Menlo College in Atherton,

August 22, 2003

Calif. Olson has used Cisco's voice-over- IP gear for several years with few complaints, but says he would like a more stable operating system, such as Linux, on his IP PBXs. The S8700 will start at around \$870 per user for a 1,000-user system. The G700 gateway and S8300 IP PBX blade will cost around \$1,000 per user. Both products will be targeted at branch-office users. Avaya has also adapted its Definity PBX call-processing software, renaming it MultiVantage and porting it to its new Linux-based platform...

... runs on the IP600 and Avaya's proprietary Unix system that runs on Avaya's. PBX . On the client side, Avaya is introducing software that can be installed on any wireless...

...based handheld - with support for a microphone and headphones - allowing it to become an ECLIPS IP phone. The server software, which can run on the MultiVantage PBX or IP PBX platforms and registers the handheld with a phone extension, provides all call-control features to...

... from Avaya, which for the first time will let users see what percentage of their IP traffic is voice packets vs. other applications. This could be helpful for identifying network bottlenecks that could affect voice quality, the company says. \*Avaya's G600 media gateway, for connecting a central site ECLIPS IP PBX or Definity PBX to a WAN. \*Seven new IP endstation products from Mitel, which can be used to connect to an IP-enabled Mitel PBX over a network connection. New handsets include the 5010 and 5020 IP Phones for enterprise desktops and the lower-cost 5001 and 5005 IP Phones (which cost less than \$200) for high-volume phone deployments where minimal phone features are required. \*Mitel will also introduce its 5140 IP Appliance, which adds a screen for Web browsing to its IP phone. The company will also showcase its 5300 series IP conference devices, which could be used by a company with remote offices to conduct teleconferences...

... service fees. \*New QoS features on 3Com's SuperStack 4400 policy switches and its NBX IP PBX will allow the Layer 4 switch to autodetect an NBX on a network and configure...

... through a management application if more or less QoS configuration is required. \*3Com's SoundStation IP 3000 - 3Com NBX, an IP conferencing station based on SoundStation IP hardware from PolyCom, is also available for companies that want to conduct conference calls over...

28/3,K/6 (Item 5 from file: 674)  
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099457

How we did it

Journal: Network World Page Number: 46  
Publication Date: February 25, 2002  
Word Count: 412 Line Count: 37

Text:

... average of at least six ratings made by at least three experienced Miercom voice-over- IP lab testers. In rotation, testers conducted real-time, two-way conversations and special tests, over separate voice-over- IP connections, between two PCs running the soft phone under test, one installed on the Compaq...

... directions. All vendors participating in this test were required to provide and technically support the IP - PBX or server-based voice-over- IP equipment on which the soft phone operated during the tests. (See an online list of...

...on the back-end systems, so the media is already set up as voice-over-

August 22, 2003

IP traffic when it gets there. In assessing soft phones, we set up our test plans...  
... of those runs to represent the final score. We used an Agilent Internet Advisor protocol **analyzer** to capture **packets** to verify coder/decoders, analyze the boot process and complete calls between soft phones.

28/3,K/7 (Item 6 from file: 674)  
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098937

AVAYA TO MELD VPNS AND VOIP  
NEW GATEWAYS TO PRIORITIZE VOICE ON VPN LINKS.  
Byline: TIM GREENE  
Journal: Network World Page Number: 8  
Publication Date: January 28, 2002  
Word Count: 569 Line Count: 49

Text:

... A SPLASH THIS WEEK AT COMNET 2002 BY PUSHING VOICE CAPABILITIES INTO A SMALL-SITE IP VPN APPLIANCE, A MOVE THAT COULD HELP ENTERPRISE CUSTOMERS SAVE MONEY ON BRANCH-OFFICE TELEPHONE BILLS. BY IDENTIFYING VOICE PACKETS AND TAGGING THEM FOR TOP PRIORITY, THE NEW VSU-5 SETS THE STAGE FOR TYING...

... TELECOMMUTER OFFICES TO CORPORATE PBXS VIA SECURE VPN LINKS. THIS SUPPORT WOULD GIVE REMOTE OFFICES PBX PHONE FEATURES AND ACCESS TO THE PUBLIC TELEPHONE NETWORK OVER PBX TRUNKS TO A LOCAL PHONE CARRIER. REGULAR PHONE LINES TO REMOTE OFFICES COULD BE REDUCED...

... IT PRECONFIGURES VSU-5 AND A LARGER NEW VPN APPLIANCE CALLED VSU-10000 TO SUPPORT IP PHONES MADE BY AVAYA AND CISCO. THIS ENSURES THAT VPN GATEWAYS RECOGNIZE PRIORITIZATION TAGS THAT...

...OF VOICE AND DATA ON VPNS, USERS SHOULD BE AWARE THAT THE RELIABILITY OF AN IP VOICE NETWORK MIGHT NOT BE ON PAR WITH THAT OF TRADITIONAL PUBLIC PHONE NETWORKS. SO IF THEY USE THE VOICE-OVER- IP OPTION, THEY MIGHT WANT TO KEEP A REGULAR PHONE LINE TO USE IN CASE OF AN IP OUTAGE, KOSIUR SAYS. WITH 2M BIT/SEC OF TRIPLE-DES THROUGHPUT AND SUPPORT FOR FIVE...

... THE REMOTE ACCESS DEVICE, AND SUPPORTS PPP OVER ETHERNET. TO RUN VOICE OVER THE VPN, IP PHONES WOULD BE PLUGGED INTO BRANCH-OFFICE LANS AND WOULD CONNECT OVER A VPN LINK TO AN AVAYA DEFINITY PBX AT A HEADQUARTERS SITE. FROM THERE, CALLS COULD BE ROUTED TO OTHER PHONES ON THE...

28/3,K/8 (Item 7 from file: 674)  
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092365

THE HOWARD  
Industry luminary Howard Anderson picks the top network products and technologies of the past 15 years.  
Byline: HOWARD ANDERSON  
Journal: Network World Page Number: 79  
Publication Date: March 26, 2001  
Word Count: 1731 Line Count: 157

Text:

...upgrade their PBXs and let managers use the telephone as a nonreal-time device. The PBX never fulfilled its promise as an intercompany data-switching device, but it did start the...

August 22, 2003

... control system and a byproduct of network control was interesting new applications such as automatic identification of dialing.\* **Packet** switching. Behind LANs, behind ATM, routers, switches and the Internet, stands packet switching. More money... The first commercially viable carrier-class replacement for a Class 4 switch exploiting voice-over- IP technology. How the industry let Sonus sneak in and garner the market is going to...

...mail, e-mail and streaming media. The applications clogged the networks, so we had to **find** solutions, such as **packet** switching and protocols, which worked to increase availability and reduce cost which led to even

...

28/3,K/9 (Item 8 from file: 674)  
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092011

**Vendors pass VoIp interop hurdle**  
But **gateway-to-gateway** problems persist, and configuration remains difficult.

Byline: BETSY YOCOM, UWE BILGER, ROB SMITHERS AND MICHAEL HOMMER, NETWORK WORLD GLOBAL TEST ALLIANCE

Journal: Network World Page Number: 45

Publication Date: March 05, 2001

Word Count: 2505 Line Count: 239

Text:

In a groundbreaking public display of voice-over- IP interoperability, nine vendors tried to prove their convergence hardware and software could work together to...

... World and its Global Test Alliance partner Miercom last month, these vendors of voice-over- IP gateways and gatekeepers, IP phones, soft phones and IP PBXs demonstrated basic levels of interoperability. They successfully placed calls with each other at " toll..."

... have to choose one vendor or the other to provide all of your voice-over- IP infrastructure gatekeepers. Many of the 2,000-plus ComNet 2001 attendees who visited the interoperability lab entered skeptical, but left convinced that voice-over- IP vendors are achieving interoperability that might soon translate into multivendor converged networks in the real

...

...a bidirectional call based on the standards " slow start" procedure. The challengeMiercom's voice-over- IP research in the past two years has shown that while many vendors claim interoperability, few...

... behind closed doors. Late last year, Network World issued an editorial challenge to voice-over- IP vendors to go public. Miercom's initial call for products, based on H.323 Version...

...which provided the " reference" gatekeepers for the test bed, as well as other voice-over- IP equipment; HearMe, Memotec, Oki, Polypix, Quintum, Siemens and Sitara. Each sent equipment (see story, page...demand, but this creates incompatibilities that may require minor recoding in a multivendor voice-over- IP environment. This is what makes out-of-the-box interoperability based on H.323 so...

...complete fast start with the Clarent gatekeeper because its transmitting side did not have an IP address and Real-Time Protocol/Real-Time Control Protocol port numbers that the Clarent gatekeeper...

... be set up using the slow-start procedure. Engineers working on the problem completed several **packet** traces to **determine** the cause, but

August 22, 2003

left the prestige still unable to complete calls via slow start. Some...

... network. The bits are decoded back to PCM speech at the receiving end. Voice-over- IP gateways and IP phones support a certain amount of vocoders, but different vendors' support varying numbers and types...

... T's T.38 standard for fax transmissions. Based on our experiences testing voice-over- IP systems, this is a significant achievement. More than half of the voice-over- IP gateways we've tested recently have failed this faxing test. It's a challenge for voice-over- IP systems to recognize fax encoding and respond to it because they have trouble distinguishing between...

... among the participants and the ComNet attendees who visited the lab was that voice-over- IP interoperability based on H.323 has come a long way in the past six months...

... attempts, only six calls failed - a 99.9984% call-completion rate. Many single voice-over- IP gateways tested privately at Miercom's Labs haven't done as well. Siemens optiPoint 300 Advance IP phone was perhaps the most out-of-the-box-ready product, able to work with...is impaired. But to be fair, we didn't test the optiPoints against any similar IP phones in this round of testing, which may deliver similar performance delays. Despite many long hours of tracing packets and analyzing code, several vendors were unable to resolve lingering incompatibilities. For example, when operating in the...

... had no trouble communicating bidirectionally with Quintum's Tenor gateways and Siemens' optiPoint 300 Advance IP phones in the same network. Quintum's Tenor gateways also could not communicate with Memotec ...

... incompatibility in the Fast Connect procedure. Avaya also could not resolve incompatibilities between its IP600 ( IP PBX ) and the Quintum gateway, possibly due to routing problems. Nuera planned to demonstrate its new...

... the product was damaged in transit and could not be integrated into the voice over IP test bed. So where do we go from here? For starters, Cisco and Clarent acknowledge gatekeeper-to-gatekeeper incompatibility issues constitute the "next phase" in voice-over- IP interoperability testing. We expect to see the leading vendors in this area - Cisco, Clarent and...

...lead to more widespread dissemination of documentation that will outline specific incompatibilities among voice-over- IP equipment - and the means to solve them. More agreement in the standards bodies as to...

28/3,K/10 (Item 9 from file: 674)  
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088565

VoIP to carry 'bandwidth tax'

Byline: PHIL HOCHMUTH

Journal: Network World Page Number: 1

Publication Date: October 30, 2000

Word Count: 1113 Line Count: 100

Text:

Voice over IP 's dirty little secret is that it can be a bandwidth hog. Observers warn that customers looking to use voice over IP had better plan to significantly bolster bandwidth and look hard at voice compression technology before making a commitment. While money can be saved with voice over IP by skirting intracompany long-distance charges and consolidating voice and data WAN circuits, users should...

...much as two-thirds of a T-1 line's bandwidth can be consumed by **IP** overhead - headers and error correction bits - depending on the type of voice-over- **IP** codec used. Standard speech-encoding algorithms, or codecs, are defined by the International Telecommunication Union...

... little 16K bit/sec and 8K bit/sec. Most corporate- and carrier-class voice-over- **IP** equipment, including gateways, **IP** phones, **IP** PBXs and videoconferencing equipment from vendors such as Cisco, Nortel Networks and Lucent, employ these...

... transmit packetized voice signals over data networks. When choosing a codec for your voice-over- **IP** network, it is important to consider how your compression method will affect the ratio of **IP** packet overhead data to actual voice frames per packet, says Scott Hamilton, **IP** telephony track manager for Tolly Research in Manasquan, N.J. Tolly Research recently measured the...

...voice T-1 circuit). That means 46K bit/sec of a T-1 is consuming **IP** overhead. "Users should not assume that allocating a T-1 equivalent for G.711 voice over **IP** on their data network will be sufficient," Hamilton says. "It's going to be close..."

... Research found that compressed G.728 and G.729a traffic was also bogged down by **IP** packet overhead. In all three codec tests, the group found that up to 80% of the bytes in the voice packets consisted of **IP** packet overhead. "If someone picks G.728 and thinks they're going to get four...

... to banks, is rolling out a Cisco Architecture for Voice Video and Integrated Data (AVVID) **IP** telephony system. Ahmad Sidani, a senior network engineer for the firm, says that in addition...

... standard he will use. "Once we identify exactly what the pattern of the voice-over- **IP** application is going to have, we can then go and identify which codec's compression..."

...want," Sidani says. T-1 lines will be used to connect AVVID call servers and **IP** phones in the branch offices to a **PBX** in its Santa Ana, Calif., headquarters, Sidani says. Although he would like to use G...

...and voice needs are going to be different in each office. "Remembering to factor in **IP** packet overhead when voice is packetized is something that can be overlooked by some users, says Brian Dal Bello, manager for Nortel's Succession enterprise voice-over- **IP** product line. If miscalculated, this can sometimes erase any planned cost savings of a voice-over- **IP** rollout, he adds. "When voice over **IP** goes into an enterprise, people have to understand all the variables that can affect their..."

... rate and calculate if they're actually saving bandwidth or money by using voice over **IP**," instead of traditional voice, he says. From the deployments Dal Bello has seen with customers...

... 711 in LANs where bandwidth is plentiful and G.729 for WANs. Other voice-over- **IP** equipment vendors are working to unload the inherent baggage that accompanies voice-over- **IP** packets. "If you can aggregate packets and put a common address in front of them, you can reduce the overhead associated with sending voice over an **IP** network," says Heidi Bersin, marketing vice president for Clarent, a maker of carrier and enterprise voice-over- **IP** gateways. "It's sort of like the multiplexing of packets." Clarent uses proprietary technology it calls ThruPacket, which sends voice-over- **IP** packets along as links in a chain instead of each packet having its own addressing. An identifier is inserted into each packet in a ThruPacket chain, which identifies the **packet** as a chain "link." Only the lead packet in the chain contains the **IP** packet overhead data including Ethernet and **IP** addresses that can cause congestion and latency in normal voice-over- **IP** networks. ThruPacket is present in the

August 22, 2003

company's carrier-class Gateway 400 and 1200 and...

... 100 for firms. Some network professionals would prefer to avoid the problems with voice over **IP** and use other technologies for converging voice and data, such as ATM. "I still say..."

... Sphericall equipment in eight remote offices via T-1 lines. Hays is looking into an **IP** version of the Sphericall product, but is not rushing to replace ATM with **IP** for his long-distance telephone trunks. "You can get a lot of latency on your voice network just because of the **IP** characteristics," he says. "I don't know if there is a good way you can..."

28/3,K/11 (Item 10 from file: 674)  
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086478

**Megaco to bridge PSTN, IPnetworks**

Byline: JAMES RAFFERTY

Journal: Network World Page Number: 49

Publication Date: August 14, 2000

Word Count: 646 Line Count: 57

Text:

... fax and multimedia calls to be switched between the public switched telephone network and emerging **IP** networks. Megaco stands for Media Gateway Control. A joint activity of the International Telecommunication Union...

... analogous role in capturing requests for address and enhanced service information by enabling retrieval via **IP** from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber-related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in a company. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office then sends an SS7 message to a signaling gateway in order to ...

... used to provide an end-to-end connection via the long-distance service provider's **IP** network to the end destination. At this point, the MGC is aware of both a...

... is set up with two terminations, a switched termination on one side and a packetized **IP** termination on the other. To provide the flexibility to check for calls other than voice...

... gateways into fax-compatible modes, and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed, delivering a document across the hybrid network. The Megaco call **discrimination package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

... applications of phone service over hybrid phone networks that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for **IP** telephony at Brooktrout Technology. He can be reached at [jraff@brooktrout.com](mailto:jraff@brooktrout.com).

28/3,K/12 (Item 11 from file: 674)  
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086477

**Megaco will bring circuit and packet networks together**  
Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 684 Line Count: 60

Text:

....as voice, fax and multimedia calls to be switched between the traditional network and emerging **IP** networks is called. Megaco stands for Media Gateway Control.A joint activity of the International...

...analogous role in capturing requests for address and enhanced service information by enabling retrieval via **IP** from existing Signaling System 7 (SS7)-enabled networks and their databases of subscriber related information...

...premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office then sends an SS7 message to a signaling gateway, in order to...

...used to provide an end-to-end connection via the long-distance service provider's **IP** network to the end destination. At this point, the MGC is aware of both a...

...is set up with two "terminations," a switched termination on one side and a packetized **IP** termination on the other. To provide the flexibility to check for calls other than voice, the MGC may set up the media gateways to do "call discrimination," using a call **discrimination package**. This enables a MGC to gather information needed to identify the media type for a

...

...swiftly take action, place both media gateways into fax compatible modes (using the fax and **IP** fax packages), and a normal fax session can take place. The call **discrimination package** will then be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls. The emerging Megaco model...

...of phone service over a hybrid phone networks that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for **IP** telephony at Brooktrout Technology. He can be reached at ...TK

28/3,K/13 (Item 12 from file: 674)  
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086457

**Megaco protocol to bring circuit ...**  
Byline: JAMES RAFFERTY  
Journal: Network World Page Number: 49  
Publication Date: August 14, 2000  
Word Count: 850 Line Count: 74

Text:

....as voice, fax and multimedia calls to be switched between the traditional network and emerging **IP** networks is called Megaco/H.248. Megaco stands for Media Gateway Control.A joint activity...

...analogous role in capturing requests for address and enhanced service information by enabling retrieval via **IP** from existing Signaling System 7

August 22, 2003

(SS7)-enabled networks and their databases of subscriber related information...

... premises equipment in an enterprise. For example, consider a fax device that sits behind a **PBX** in an enterprise. In this case, a call is placed by the fax device and routed to the local central office by the **PBX**. The central office in the local loop then sends an SS7 message to a signaling...

... used to provide an end-to-end connection via the long-distance service provider's **IP** network to the end destination. At this point, the MGC is aware of both a...

... is set up with two "terminations," a switched termination on one side and a packetized **IP** termination on the other. In order to provide the flexibility to check for calls other...

... media gateways so that they will do "call discrimination." This is accomplished using a call **discrimination package**. This enables a MGC to gather information needed to identify the media type for a...

... swiftly take action, place both media gateways into fax compatible modes (using the fax and **IP** fax packages), and a normal fax session can take place. From this point, the call **discrimination package** will be deactivated and the fax session can proceed to its conclusion, delivering a document across the hybrid network. In this example, the Megaco call **discrimination package** was used for fax **detection**, but this **package** is also sufficiently robust to enable detection of text telephone calls which are in common...

... of phone service over a hybrid phone network that will contain a mix of switched, **IP** and ATM technology. Rafferty is senior product manager for **IP** telephony at Brooktrout Technology. He can be reached at ...TK

28/3,K/14 (Item 13 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2003 IDG Communications. All rts. reserv.

075423

Moving toward convergence

AltiGen's PC-based **PBX** bets your phone system on NT.

Byline: Douglas Spindler

Journal: Network World Page Number: 73

Publication Date: June 21, 1999

Word Count: 740 Line Count: 68

Text:

... Communications' AltiServ, a Windows NT-based telephone and voice mail system. AltiServ is a combination **PBX**, voice mail and messaging system housed in a single NT server. With the addition of AltiWare **IP**, telephone calls can be routed over an **IP** network to another AltiServ server. While AltiServ Open Edition (OE) 2.1 has been on...

...market since late last year, we now think it warrants closer examination because it blends **PBX**, PC and messaging technologies into one system, and it costs anywhere from 30% to 75...

...is limited to 144 users per server because the system uses ISA slots for the **PBX** /voice mail functionality and PCI slots for voice over **IP**. We first tested AltiServ with voice traffic only. Our users reported the system was easy to use, and their voices were clear and easily **recognizable**. Next, using a **packet** generator we placed a moderate network load across our pseudo-WAN link. Conversation quality degraded...

... so we configured the routers to use Priority Queuing (packet

August 22, 2003

prioritization) for the voice-over- IP packets. Sure enough, voice quality returned to its previous level. In the version of AltiWare IP we tested, the bandwidth requirements for voice over IP were surprisingly large compared to competitors' voice-over- IP products. AltiWare IP requires 96K bytes per channel whereas other voice-over- IP products that support compression require only 10K to 20K bytes per channel. AltiGen is expected to release a new version of AltiWare IP this fall that will support compression. Because users are accustomed to 24-7 telephone uptime...

28/3,K/15 (Item 1 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2003 Resp. DB Svcs. All rts. reserv.

3488267 Supplier Number: 03488267 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
VDI--pulling together: integrating voice and data over a single network has been vaunted as the way ahead for years--but how many UK corporates have yet to make the leap of faith required even to push their internal voice traffic over their own LAN? Philip Hunter looks at both sides of the VDI story to see if at last they are pulling together. (Telecoms) (Cover Story)

(Voice-data integration)

Communicate, p 19(3)

June 2002

DOCUMENT TYPE: Journal; Cover Story; Industry Overview ISSN: 1352-0040 (United Kingdom)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 2719

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...purely at Layer 2 and are therefore incapable of acting on Layer 3 information within IP packet headers. This means they cannot **identify** voice **packets**, and so cannot give them the priority they need to ensure they are delivered within...

...is no longer an issue with recently installed Layer 3 switches, which are capable of **identifying** and prioritising IP **packets**. But to muddy the waters further, some sites have a mixture of Layer 3 switches...

...that return on investment (ROI) calculations will depend heavily not just on where the existing **PBX** lies on its lifecycle curve, but also on the capabilities of the LAN switching equipment...

...need substantial upgrading to handle voice, then it is unlikely to be worth ditching your **PBX** if that is working well too. Even if the **PBX** is coming up for replacement, it may still be a close decision between upgrading your LAN and taking the path of least resistance by installing a new **PBX**.

In general though, enterprises are likely to migrate to VoIP as their existing PBXs reach...

28/3,K/16 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04701404 Supplier Number: 62986533 (USE FORMAT 7 FOR FULLTEXT)  
Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours.  
M2 Presswire, pNA  
June 27, 2000  
Language: English Record Type: Fulltext

August 22, 2003

Document Type: Magazine/Journal; Trade  
Word Count: 755

... expect superior call quality and call volumes regardless of whether connections are made with traditional, **PBX** or **IP** telephones.whether the backbone is lightly or heavily congested.

The report stated: "During voice quality...

28/3,K/17 (Item 2 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

04079505 Supplier Number: 53647939 (USE FORMAT 7 FOR FULLTEXT)  
**NEW WIRELESS COMMUNICATIONS FOR HOMEOWNERS & SMALL BUSINESSES.**

Telephone IP News, v10, n2, pNA

Feb, 1999

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 910

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...doing just that with the products we have developed.. Small businesses, home offices, telecommuters and **busy** families will **discover** that our products will help them succeed or just make life simpler in the next...

...data jacks. The Controller is a digital voice switch and a router for all TCP/ **IP** data within the home and to / from the Internet. It also contains three expansion slots...

...The system will also be capable of providing users with voice, data and video over **Internet Protocol** ( **IP** ) technology. "Home networking represents one of the most potentially explosive new market opportunities in communications...

...systems as a business grows. The system transforms a small business telephone system into a **PBX** with standard **PBX** features. Plus, the system is portable. When a company expands into new space, the system...

28/3,K/18 (Item 3 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.

03400844 Supplier Number: 47003071 (USE FORMAT 7 FOR FULLTEXT)

**FACTS ON THE COST APPEAL OF INTERNET FAX**

Computer Finance, v7, n8, pN/A

Jan 1, 1997

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 3737

... the LAN), three RJ-11 analogue modem ports (for modems, a fax board or server, **PBX** , or the CO), a fax loop start port (to connect a fax machine if desired), one serial port (for configuration only), and a 425MB hard disk. The **IP** /FaxRouter converts fax data into standard TCP/ **IP** packets that behave exactly like any other type of data on the network. The disk is used to store a fax until TCP confirms the delivery of all the packets , thus reproducing the **confirmation** aspect of the native fax interface (even though the transmission is not necessarily real-time...

28/3,K/19 (Item 1 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext

August 22, 2003

(c) 2003 CMP Media, LLC. All rts. reserv.

01022154 CMP ACCESSION NUMBER: WIN19940601S1885  
**Mobile Mail Keeps Remote Users in the Loop** (E-Mail Software)  
Hailey Lynne McKerry  
WINDOWS MAGAZINE, 1994, n 506 , 076  
PUBLICATION DATE: 940601  
JOURNAL CODE: WIN LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: New Products

TEXT:

... size to access important messages without having to sort through all of them. The **package** includes icon-based **location** profiles, which can be altered with a single mouse click, to connect from often visited...

...as eight communications methods per location, from among such protocols as IPX/SPX (NetWare), TCP/ IP (UNIX) and X.25. cc:Mail Mobile also supports connections via ISDN, **PBX**, direct connection, RAM Mobile Data, cellular and landline modems. The package includes scripts for more...

28/3,K/20 (Item 1 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

25604827  
**Avaya's Growth in U.S. IP Telephony Market Outpacing Industry Average**  
CANADA NEWswire  
October 21, 2002  
JOURNAL CODE: WCNW LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 894

... VoIP Assessment tool is an essential tool in the IP Telephony evolution, enabling businesses to **pinpoint** potential voice traffic **bottlenecks** on IP Telephony networks before an implementation. Services such as these help minimize post-installation performance problems in the design stage. Another tool helping companies make the move to IP Telephony simpler is the Avaya(TM) Installation Wizard, which reduces complexity and time-to-install for the Enterprise Class IP Solutions (ECLIPS) portfolio. The Avaya Installation Wizard is a browser-based tool that is intuitive...

...including 90 percent of the Fortune 500(R). A world leader in secure and reliable **Internet Protocol** (IP) telephony systems, communications software applications and services, Avaya is driving the convergence of voice and...

28/3,K/21 (Item 2 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

12397165 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**ALCATEL: Alcatel's OmniCore 5022 backbone routing switch sails through independent VoIP tests with flying colours**  
M2 PRESSWIRE  
June 27, 2000  
JOURNAL CODE: WMPR LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 686

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... expect superior call quality and call volumes regardless of whether connections are made with traditional, **PBX** or IP telephones.whether the

August 22, 2003

backbone is lightly or heavily congested.

The report stated: "During voice quality...

**28/3,K/22 (Item 3 from file: 20)**  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.

07727780 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Cabletron Systems and Cirilium Partner to Deliver Voice-Over-IP Solutions**  
PR NEWSWIRE  
October 13, 1999  
JOURNAL CODE: WPRW LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 618

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... services. Interconnecting via SmartVoice router and switches, SVG utilises a single (UDP) protocol address to **identify IP packets** that contain voice traffic, allowing Cabletron's SSR's to prioritise voice traffic at wire...

**28/3,K/23 (Item 1 from file: 696)**  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
(c) 2003 The Dialog Corp. All rts. reserv.

00811672  
**Niagara Bridge Commission Connected By DragonWave**  
Wireless Data News  
November 6, 2002 VOL: 10 ISSUE: 23 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 843 RECORD TYPE: FULLTEXT  
(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

...The system operates in 18 GHz licensed bandwidth, supports voice as well as video over **Internet protocol** and guarantees 100 Mbps full-duplex service.  
"This is meant as the large backbone pipe...paid \$175,000 for an installed network using DragonWave's technology to connect is seven **private branch exchanges**, O'Reilly adds. "This is now seven different locations tied together with these DragonWave radios...

...reason we went to DragonWave is because we're going to go to video over **IP** and we knew that the other wireless solution wasn't going to be able to take us to that level. In going to video over **IP**, which is going to take a large chunk of the pipe we've put in...

...we needed to be above the 11 [Mbps] bandwidth."

The commission will use video over **IP** primarily for its security capabilities. In the event of a bomb threat or of suspicious...

...we'll be able to take a look at the video and through imaging techniques **find** out when that **package** was left or some container was left" O'Reilly says. "Whether we'll be able...

August 22, 2003

28/3,K/24 (Item 2 from file: 696)  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
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00779432  
**Bell Companies Could Hop On Board Of IBM/Cisco VoIP Deal**  
Communications Today  
October 30, 2001 VOL: 7 ISSUE: 203 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 249 RECORD TYPE: FULLTEXT  
  
(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:  
...System's [CSCO] and IBM's [IBM] new packaged service that helps businesses roll out IP voice in a small or mid-size office, an analyst said.  
Recently, Cisco and IBM agreed to offer a turnkey package, which includes Cisco IP telephones and IP PBX software bundled with an Intel-based IBM server, to give customers a complete package to deploy a voice-over- IP (VoIP) application.  
The package is aimed at enterprise branch-office customers where the technology is...  
...better positioned when demand in the telecom market returns.  
Olson said he thinks the turnkey package could find a niche in the current market.  
"It is a very valuable pre-packaged solution and..."

28/3,K/25 (Item 3 from file: 696)  
DIALOG(R)File 696:DIALOG Telecom. Newsletters  
(c) 2003 The Dialog Corp. All rts. reserv.

00666414  
**PRODUCTS**  
MULTIMEDIA WEEK  
April 19, 1999 VOL: 8 ISSUE: 15 DOCUMENT TYPE: NEWSLETTER  
PUBLISHER: PHILLIPS BUSINESS INFORMATION  
LANGUAGE: ENGLISH WORD COUNT: 901 RECORD TYPE: FULLTEXT  
  
(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:  
...automatically optimizing the network's handling of business-driven traffic.  
AppSwitch monitors the network to identify congestion points and reveals the applications, users and behaviors that consume network resources; it also guarantees...  
  
...board, price is \$75 per port, available Q3 1999. Analogic has doubled the voice over IP port density of its newest telephony application processor board to 60 channels per slot.  
The...banks/concentrators; T-1/E-1 multiplexers; digital access and cross-connect systems; computer-to- PBX interfaces; and SONET/SDH multiplexers.  
The CS61584A supports 3.3V as well as 5V operation...

...system chip-set compliant with ANSI2 and ITU-T3 standards for high- speed communications using internet protocol over existing telephone lines. Consisting of three devices, the chipset is expected to sample from...